DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY SOUTH POTOMAC
6509 SAMPSON ROAD, SUITE 217
DAHLGREN, VIRGINIA 22448-5108

5090
Ser PRSD41BW/069
July 31, 2013

Ms. Susan D. Mackert
VPDES Water Permit Writer
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193

Dear Ms. Mackert:

SUBJECT: AMENDMENT TO REISSUANCE OF VPDES PERMIT NO. VA0073636 FOR OUTFALL 006

Enclosed is the amended EPA Form 2F Application for Outfall 006 of the Virginia Pollutant Discharge Elimination System permit number VA0073636 for the Naval Support Facility Dahlgren, Minor Industrial Storm Water Permit. This outfall has received 120,000 square feet of increased non-industrial drainage area as a result of maintenance of the stormwater conveyance system which re-routed a blocked line to drain towards Outfall 006. Enclosure (2) is the Outfall 006 map of the drainage area for 235,000 square feet of total drainage area.

Please direct all correspondence to:

ATTN: Director, Environmental Division
Department of the Navy
NAVFAC Washington, PWD South Potomac
18329 Thompson Road, Suite 226
Dahlgren, Virginia 22448-5110

For further information, please contact Ms. Brenna White, Code PRSD41BW, at (540) 653-2341.

Sincerely,

JEFFREY C. BOSSART
By direction

Enclosures: 1. Form 2F (for all Outfall 006)
2. Drainage Map, of Outfall 006, for Form 2F, III

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
VA7170024684

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM **2F** NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
002	38	19	15	77	01	30	UPPER MACHODOC CREEK
003	38	19	45	77	01	15	GAMBO CREEK
004	38	19	15	77	02	00	UPPER MACHODOC CREEK
006	38	19	15	77	02	00	UPPER MACHODOC CREEK
007	38	20	00	77	01	00	GAMBO CREEK
009	38	19	30	77	01	45	UPPER MACHODOC CREEK
012	38	18	15	77	02	00	BLACK MARSH / POTOMAC RIVER
013	38	18	15	77	02	00	UPPER MACHODOC CREEK

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
N/A					

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

ENCLOSURE (1)

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of imperious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*	Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*
002	123,055 sq ft	123,055 sq ft	009	91,980 sq ft	153,300 sq ft
003	133,840 sq ft	215,871 sq ft	012	<1,000 sq ft	829,000 sq ft
004	2,080,000 sq ft	6,500,00 sq ft	013	<1,000 sq ft	572,000 sq ft
*006	124,500 sq ft	235,000 sq ft			
007	87,271 sq ft	87,271 sq ft			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Refer to ENCLOSURE (4) for Additional Information
*002 - Drainage area includes paved surfaces and seven below-grade gun mount sumps which discharge to the Upper Machodoc Creek.
*003 - Drainage area includes paved surfaces and below-grade gun mount sumps which discharge to the Gambo Creek.
*004 - Drainage area includes Transportation and other PW areas, housing,
*006 - At this yardcraft area boat upkeep associated waste oil and bilge water is collected into 55-gallon drums and recycled. The drums are covered and stored on containment pallets in a containment berm.
*007 - Drainage area includes paved surfaces and below-grade gun mount sumps which discharge to the Gambo Creek.
*009 - Drainage area includes runnoff from an exposed metal storage area, outdoor vehicle and equipment storage, and a covered salt dome facility. The exposed metal storage area includes
*012 - This area includes the southern portion of the Open Burn/Open Detonation (OB/OD) explosives test area.
*013 - This area includes the northern portion of the OB/OD explosives test area.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
002	Monthly inspections of gunmount area	4-A
003	Monthly inspections of gunmount area	4-A
004	Regular inspection of sumps, oil-water separator maintenance, and regular housekeeping	4-A, 1-H
006	Cover drums and store on containment pallets, weekly inspection	4-A
007	Monthly inspections of gunmount area	4-A
009	Sand and salt are covered, revegitated area; no controls for metal storage	4-A
012 / 013	Regular inspection (009, 012, 013 - quarterly inspections)	4-A

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title *(type or print)*	Signature	Date Signed
JEFFREY BOSSART, by direction of CO	Jeffrey C Bossart	7/31/13

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

AN ILLICIT DISCHARGE SURVEY WAS CONDUCTED OCTOBER THROUGH DECEMBER 1996 TO DETERMINE IF ANY NONSTORMWATER DISCHARGES OCCURED AT NSF DAHLGREN. NONSTORMWATER DISCHARGES IDENTIFIED DURING THE INITIAL SURVEY HAVE BEEN CORRECTED. AS AN ONGOING EFFORT TO PREVENT AND IDENTIFY NONSTORMWATER DISCHARGES , ANNUAL FACILITY INSPECTIONS ARE PERFORMED TO EVALUATE NEW AND EXISTING AREAS AS DESCRIBED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). ADDITIONALLY AN ILLICIT DISCHARGE SURVEY FOR NSF DAHLGREN HAS BEEN AWARDED AND WILL BE CONDUCTED DURING 2013. IF ANY NONSTORMWATER DISCHARGES ARE DISCOVERED, VDEQ WILL BE NOTIFIED AND CORRECTIVE ACTION WILL BE TAKEN.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

NO SIGNIFICANT SPILLS/LEAKS IN THE LAST THREE YEARS (2009-2012).

EPA ID Number *(copy from Item 1 of Form 1)*
VA7170024684

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided.
Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

N/A

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☑ Yes (*list all such pollutants below*) ☐ No (*go to Section IX*)

16 NOVEMBER 2011 BIOLOGICAL ACUTE TOXICITY TESTING WAS PREFORMED AT OUTFALLS 002 AND 006 ACCORDING TO VPDES PERMIT NO. VA0073636 REQUIREMENTS. 48-HOUR LC50 WAS > 100%.

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☐ Yes (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☑ No (*go to Section X*)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Coastal Bioanalysts, Inc.	6400 Enterprise Court Gloucester, VA 23061	(804) 694-8285	48-Hour Acute Biological Toxicity
Tidewater Inc.	7161 Columbia Gateway Drive - Suite C Columbia, MD 21046	(410) 997 4458 x 157	TPH, TSS, Cu, and most Permit required ATTACHMENT A Sampling
Environmental Systems Service, LTD	218 North Main Street Culpepper, VA 22701	(540) 825 6660	Tributyltin for Permit required ATTACHMENT A Sampling

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (*Type Or Print*)	B. Area Code and Phone No.
JEFFREY C. BOSSART, By direction of Commanding Officer	(301) 744-4705
C. Signature	D. Date Signed
	7/31/13

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Biological Oxygen Demand (BOD5)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Chemical Oxygen Demand (COD)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Suspended Solids (TSS)	12 mg/L	N/A-SW grab only	7.67 mg/L	N/A	3	NO SIGNIFICANT SOURCES
Total Nitrogen	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Phosphorus	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
pH	Minimum 6.15	Maximum 7.56	Minimum N/A	Maximum N/A	3	ACID RAIN (LOW)/CONCRETE LEACH(HIGH)

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TPH	<QL (QL=5mg/L)	N/A-SW monitoring	<QL	N/A-SW monitoring	3	General mechanical/vehicle activity
Cu, dissolved	9.7 ug/L	N/A-SW monitoring	N/A	N/A-SW monitoring	1	Exposed metal sto and range activity

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						

Part D - Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
08/25/11	~60 minutes	0.18 inches	>72 hours	Not measured, flow rate is a product of rainfall intensity.	0.00345 MG (unit, million gallons)

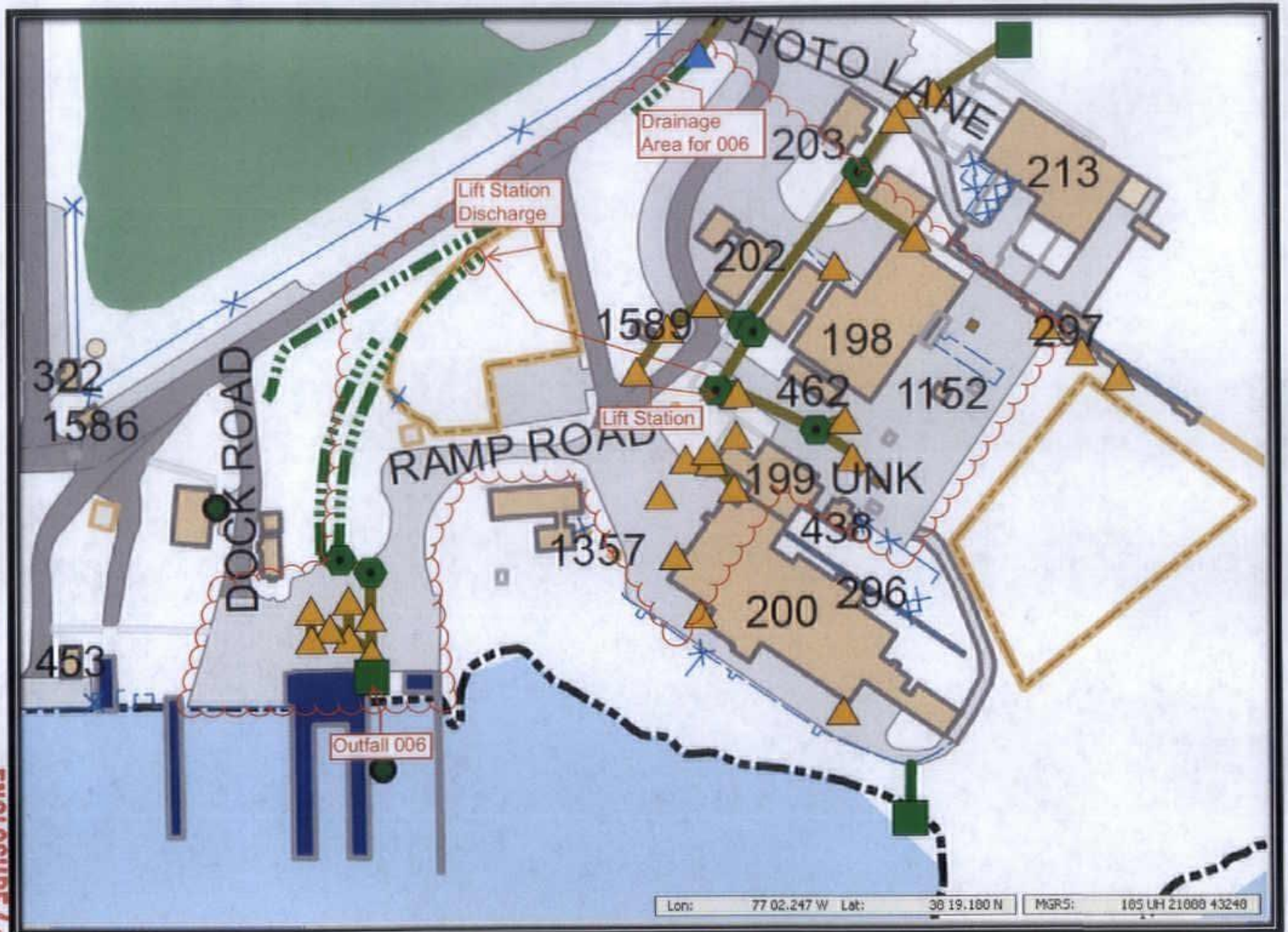
7. Provide a description of the method of flow measurement or estimate.

(NEW CALCULATIONS WITH ADDITIONAL 2.985 acres)

Flow measurement is an estimate from landcover data (runnoff coefficient).

Average runnoff coefficient = 0.95 for 53% paved, and 0.10 for 47% unpaved

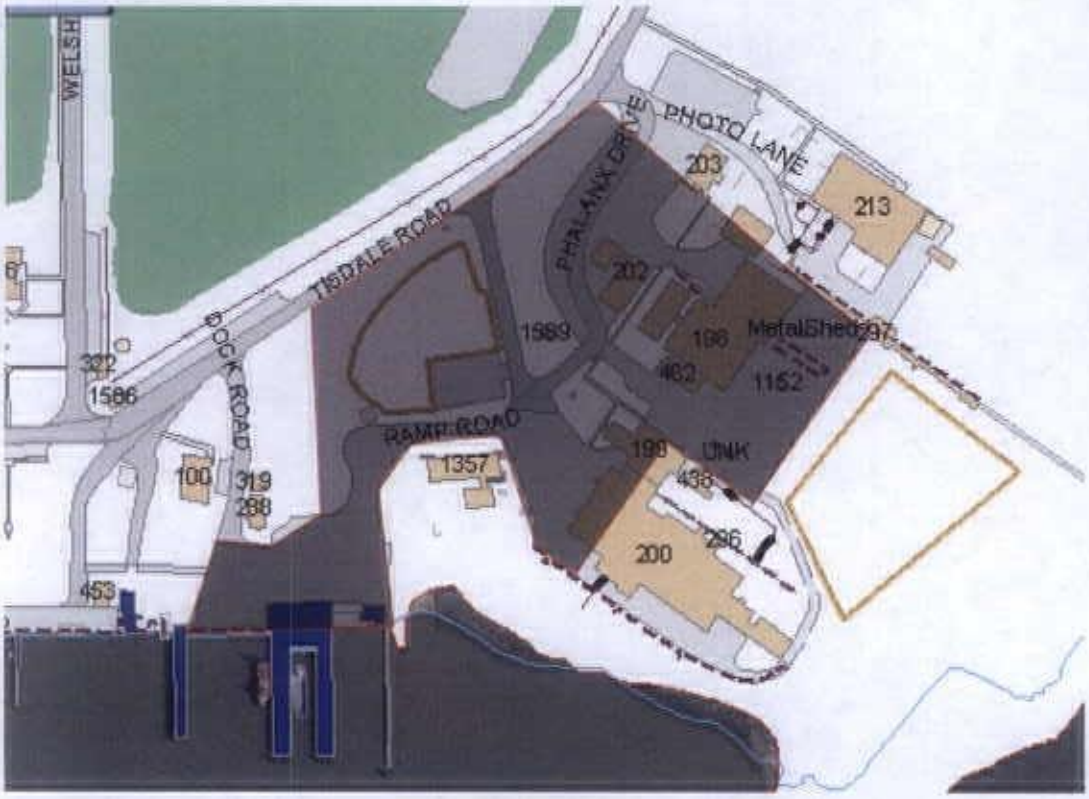
Flow estimate calculation = (0.96) (precipitation event in feet, ft) = Flow in MG (million gallons)


HOTO LANE
Drainage Area for 006
203
213
Lift Station Discharge
202
1589
198
297
322
1586
462
1152
Lift Station
RAMP ROAD
DOCK ROAD
199 UNK
438
1357
296
200
453
Outfall 006
Lon: 77 02.247 W Lat: 38 19.180 N
MGRS: 18S UH 21088 43240

ENCLOSURE (2)

OUTFALL 006 Map:

Outfall 006 Drainage Area:



Mackert, Susan (DEQ)

From: White, Brenna M CIV NAVFAC Washington [brenna.white@navy.mil]
Sent: Friday, February 08, 2013 3:48 PM
To: Mackert, Susan (DEQ)
Subject: RE: VA0073636 - NSF Dahlgren, Outfall 006
Attachments: CHANGE to EPAForm3510-2F (006).pdf

Ms. Mackert,

RE: VA0073636 - NSF Dahlgren, Outfall 006

Most changes for Form 2F occurred in Part D 7.: (This is an unsigned copy for you information, a signed version will be mailed to your office)

Additional drainage area to outfall 006 by routing drainage away from a capped/submerged stormwater culvert
0.835 acres rooftop
1.49 acres parking lot
0.66 acres grass

This increases the total area to 5.395 acres (235,027 cubic feet) and the ratio to 53% paved/impervious and 47% unpaved/grass

VR,
Brenna White
-----Original Message-----
From: Mackert, Susan (DEQ) [mailto:Susan.Mackert@deq.virginia.gov]
Sent: Wednesday, January 30, 2013 13:01
To: White, Brenna M CIV NAVFAC Washington
Subject: RE: VA0073636 - NSF Dahlgren, Outfall 006

Hi Brenna,

I would recommend sending in a revised application for only Outfall 006 showing the increase in volume of flow and any increase in drainage area. No need to submit the entire application again. Just those pages that are applicable to Outfall 006. I would also suggest you explain what/why/when/how, etc. in a cover letter accompanying the revision. And just to ensure I get it, send it to my attention with something in the Re: about revised permit application.

Also, you would need to look at possible revisions to the facility's SWP3.

Let me know if you need anything else,
Susan

Susan Mackert
Water Permit Writer, Senior II
Regional Industrial Storm Water Coordinator
Certified Erosion and Sediment Control Inspector #2804
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3853

Fax: (703) 583-3821
susan.mackert@deq.virginia.gov

-----Original Message-----
From: White, Brenna M CIV NAVFAC Washington [mailto:brenna.white@navy.mil]
Sent: Tuesday, January 29, 2013 1:06 PM
To: Mackert, Susan (DEQ)
Subject: VA0073636 - NSF Dahlgren, Outfall 006

RE: VA0073636 - NSF Dahlgren, Outfall 006

Susan,

We are making changes to the drainage area that contributes to Outfall 006, these changes would increase the volume of water that was discharges without adding to the "industrial area". Other than making changes to the flow calculation/estimate and updating the drainage area map, what actions do we need to take?

Thank you for your help!
Brenna,
Brenna White
Naval Support Facility (NSF) Dahlgren
Environmental Division
Water Media Manager
Desk: (540)653-2341

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
VA7170024684

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM 2F NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

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N/A					

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Continue on Page 2

Continued from the Front

IV. Narrative Description of Pollutant Sources

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B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Refer to ENCLOSURE (4) for Additional Information
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V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
JEFFREY BOSSART, by direction of CO		

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

AN ILLICIT DISCHARGE SURVEY WAS CONDUCTED OCTOBER THROUGH DECEMBER 1996 TO DETERMINE IF ANY NONSTORMWATER DISCHARGES OCCURED AT NSF DAHLGREN. NONSTORMWATER DISCHARGES IDENTIFIED DURING THE INITIAL SURVEY HAVE BEEN CORRECTED. AS AN ONGOING EFFORT TO PREVENT AND IDENTIFY NONSTORMWATER DISCHARGES , ANNUAL FACILITY INSPECTIONS ARE PERFORMED TO EVALUATE NEW AND EXISTING AREAS AS DESCRIBED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). ADDITIONALLY AN ILLICIT DISCHARGE SURVEY FOR NSF DAHLGREN HAS BEEN AWARDED AND WILL BE CONDUCTED DURING 2013. IF ANY NONSTORMWATER DISCHARGES ARE DISCOVERED, VDEQ WILL BE NOTIFIED AND CORRECTIVE ACTION WILL BE TAKEN.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

NO SIGNIFICANT SPILLS/LEAKS IN THE LAST THREE YEARS (2009-2012).

EPA ID Number *(copy from Item 1 of Form 1)*
VA7170024684

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided.
Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

N/A

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☑ Yes (*list all such pollutants below*) ☐ No (*go to Section IX*)

16 NOVEMBER 2011 BIOLOGICAL ACUTE TOXICITY TESTING WAS PREFORMED AT OUTFALLS 002 AND 006 ACCORDING TO VPDES PERMIT NO. VA0073636 REQUIREMENTS. 48-HOUR LC50 WAS > 100%.

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☐ Yes (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☑ No (*go to Section X*)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Coastal Bioanalysts, Inc.	6400 Enterprise Court Gloucester, VA 23061	(804) 694-8285	48-Hour Acute Biological Toxicity
Tidewater Inc.	7161 Columbia Gateway Drive - Suite C Columbia, MD 21046	(410) 997 4458 x 157	TPH, TSS, Cu, and most Permit required ATTACHMENT A Sampling
Environmental Systems Service, LID	218 North Main Street Culpepper, VA 22701	(540) 825 6660	Tributyltin for Permit required ATTACHMENT A Sampling

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (*Type Or Print*)	B. Area Code and Phone No.
JEFFREY C. BOSSART, By direction of Commanding Officer	(301) 744-4705
C. Signature	D. Date Signed

EPA ID Number (*copy from Item 1 of Form 1*)
VA7170024684 (OUTFALL 006)

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Biological Oxygen Demand (BOD5)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Chemical Oxygen Demand (COD)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Suspended Solids (TSS)	12 mg/L	N/A-SW grab only	7.67 mg/L	N/A	3	NO SIGNIFICANT SOURCES
Total Nitrogen	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Phosphorus	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
pH	Minimum 6.15	Maximum 7.56	Minimum N/A	Maximum N/A	3	ACID RAIN (LOW)/CONCRETE LEACH(HIGH)

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TPH	<QL (QL=5mg/L)	N/A-SW monitoring	<QL	N/A-SW monitoring	3	General mechanical/vehicle activity
Cu, dissolved	9.7 ug/L	N/A-SW monitoring	N/A	N/A-SW monitoring	1	Exposed metal sto and range activity

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
08/25/11	~60 minutes	0.18 inches	>72 hours	Not measured, flow rate is a product of rainfall intensity.	0.00345 MG (unit, million gallons)

7. Provide a description of the method of flow measurement or estimate.

(NEW CALCULATIONS WITH ADDITIONAL 2.985 acres)

Flow measurement is an estimate from landcover data (runnoff coefficient).

Average runnoff coefficient = 0.95 for 53% paved, and 0.10 for 47% unpaved

Flow estimate calculation = (0.96) (precipitation event in feet, ft) = Flow in MG (million gallons)

DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY SOUTH POTOMAC
6509 SAMPSON ROAD, SUITE 217
DAHLGREN, VIRGINIA 22448-5108

IN REPLY REFER TO
5090
Ser PRSD41BW/010
January 10, 2013

Northern Regional Office
Department of Environmental Quality
13901 Crown Court
Woodbridge, Virginia 22193

Dear Gentlemen:

SUBJECT: VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT (VPDES) #VA0073636

Enclosure (1) is Naval Support Facility Dahlgren's VPDES Permit #VA0072626 Attachment A, analytical results for Outfall 009, for the fourth year of the permit term. Analytical Laboratory reports are also provided as Enclosure (2).

The samples for Outfall 009 were taken on December 20, 2012 within thirty minutes of the precipitation reaching 0.10 inches. The rain event lasted over a period of several hours beginning on the 20th and lasting through the 21st of December and is summarized below:

Date	Total Precipitation (inches)	Total Monthly Rainfall (inches)
20-21 December	0.88	3.48

As indicated through telephone and email correspondence with the Virginia Department of Environmental Quality (Enclosure (3)), Chlorine Produced Oxidant is to be removed from list of parameters required to be analyzed under the VPDES permit. Email correspondence also indicates total residual chlorine to be analyzed via field measurements using NSF Dahlgren's potable water chlorine meter, a Hach Pocket Cholorimeter II. The total residual chlorine reported on December 20 was 0.00 mg/L.

The analytical methodology implemented for Ammonia differs from that listed in permit Attachment A (EPA Method 350.1). Notwithstanding, Enclosure (4) provides documentation indicating

the method used by the analytical laboratory, *ASTM Method D6919-03*, is an approved method in 40 CFR Part 136, and the laboratory has obtained NELAC certification for this method.

Please direct all correspondence to:

ATTN: Director, Environmental Division
Department of the Navy
NAVFAC Washington, PWD South Potomac
18329 Thompson Road, Suite 226
Dahlgren, Virginia 22448-5110

For further information, please contact Ms. Brenna White, Code PRSD41BW, at (540) 653-2341.

Sincerely,

WALTER A. LEGG, P.E.
By direction

Enclosures:
1. VPDES Permit Attachment A
2. Analytical Laboratory Reports
3. Email Correspondence
4. Documentation for *ASTM Method D6919-03*

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
METALS						
7440-36-0	Antimony, dissolved	(3)	(3)	<0.0020 mg/L	G or C	2/5 YR
7440-38-2	Arsenic, dissolved	(3)	(3)	<0.0030 mg/L	G or C	2/5 YR
7440-43-9	Cadmium, dissolved	(3)	(3)	0.0034 mg/L	G or C	2/5 YR
16065-83-1	Chromium III, dissolved [6]	(3)	(3)	<0.010 mg/L	G or C	2/5 YR
18540-29-9	Chromium VI, dissolved [6]	(3)	(3)	<0.010 mg/L	G or C	2/5 YR
7440-50-8	Copper, dissolved	(3)	(3)	0.0050 mg/L	G or C	2/5 YR
7439-92-1	Lead, dissolved	(3)	(3)	0.0015 mg/L	G or C	2/5 YR
7439-97-6	Mercury, dissolved	(3)	(3)	0.00023 mg/L	G or C	2/5 YR
7440-02-0	Nickel, dissolved	(3)	(3)	0.0021 mg/L	G or C	2/5 YR
7782-49-2	Selenium, dissolved	(3)	(3)	<0.0050 mg/L	G or C	2/5 YR
7440-22-4	Silver, dissolved	(3)	(3)	<0.0050 mg/L	G or C	2/5 YR
7440-28-0	Thallium, dissolved	(4)	(5)	0.00043 mg/L	G or C	2/5 YR
7440-66-6	Zinc, dissolved	(3)	(3)	0.046 mg/L	G or C	2/5 YR
PESTICIDES/PCB'S						
309-00-2	Aldrin	608	0.05	<0.025 ug/L	G or SC	2/5 YR
57-74-9	Chlordane	608	0.2	<0.5 mg/L	G or SC	2/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	622	(5)	<0.98 ug/L	G or SC	2/5 YR
72-54-8	DDD	608	0.1	<0.025 ug/L	G or SC	2/5 YR
72-55-9	DDE	608	0.1	<0.025 ug/L	G or SC	2/5 YR
50-29-3	DDT	608	0.1	<0.025 ug/L	G or SC	2/5 YR
8065-48-3	Demeton	(4)	(5)	<2.0 ug/L	G or SC	2/5 YR
60-57-1	Dieldrin	608	0.1	<0.025 ug/L	G or SC	2/5 YR
959-98-8	Alpha-Endosulfan	608	0.1	<0.025 ug/L	G or SC	2/5 YR
33213-65-9	Beta-Endosulfan	608	0.1	<0.025 ug/L	G or SC	2/5 YR
1031-07-8	Endosulfan Sulfate	608	0.1	<0.025 ug/L	G or SC	2/5 YR
72-20-8	Endrin	608	0.1	<0.025 ug/L	G or SC	2/5 YR

ENCLOSURE (1)

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
7421-93-4	Endrin Aldehyde	(4)	(5)	<0.025 ug/L	G or SC	2/5 YR
86-50-0	Guthion	622	(5)	<0.98 ug/L	G or SC	2/5 YR
76-44-8	Heptachlor	608	0.05	<0.025 ug/L	G or SC	2/5 YR
1024-57-3	Heptachlor Epoxide	(4)	(5)	<0.025 ug/L	G or SC	2/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	(5)	<0.025 ug/L	G or SC	2/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	(5)	<0.025 ug/L	G or SC	2/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	(5)	<0.025 ug/L	G or SC	2/5 YR
143-50-0	Kepone	(9)	(5)	0.0 ug/L	G or SC	2/5 YR
121-75-5	Malathion	(4)	(5)	<2.0 ug/L	G or SC	2/5 YR
72-43-5	Methoxychlor	(4)	(5)	<0.025 ug/L	G or SC	2/5 YR
2385-85-5	Mirex	(4)	(5)	<0.025 ug/L	G or SC	2/5 YR
56-38-2	Parathion	(4)	(5)	<0.98 ug/L	G or SC	2/5 YR
11096-82-5	PCB 1260	608	1.0	<0.5 ug/L	G or SC	2/5 YR
11097-69-1	PCB 1254	608	1.0	<0.5 ug/L	G or SC	2/5 YR
12672-29-6	PCB 1248	608	1.0	<0.5 ug/L	G or SC	2/5 YR
53469-21-9	PCB 1242	608	1.0	<0.5 ug/L	G or SC	2/5 YR
11141-16-5	PCB 1232	608	1.0	<0.5 ug/L	G or SC	2/5 YR
11104-28-2	PCB 1221	608	1.0	<0.5 ug/L	G or SC	2/5 YR
12674-11-2	PCB 1016	608	1.0	<0.5 ug/L	G or SC	2/5 YR
1336-36-3	PCB Total	608	7.0	<3.5 ug/L	G or SC	2/5 YR
8001-35-2	Toxaphene	608	5.0	<0.99 ug/L	G or SC	2/5 YR
BASE NEUTRAL EXTRACTABLES						
83-32-9	Acenaphthene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
120-12-7	Anthracene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
92-87-5	Benzidine	(4)	(5)	<47.6 ug/L	G or SC	2/5 YR
56-55-3	Benzo (a) anthracene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
207-08-9	Benzo (k) fluoranthene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
50-32-8	Benzo (a) pyrene	625	10.0	<1.4 ug/L	G or SC	2/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMP FREQUE
111-44-4	Bis 2-Chloroethyl Ether	(4)	(5)	<2.9 ug/L	G or SC	2/5 YR
39638-32-9	Bis 2-Chloroisopropyl Ether	(4)	(5)	<2.9 ug/L	G or SC	2/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0	<2.9 ug/L	G or SC	2/5 YR
91-58-7	2-Chloronaphthalene	(4)	(5)	<2.9 ug/L	G or SC	2/5 YR
218-01-9	Chrysene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0	<1.4 ug/L	G or SC	2/5 YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0	<2.9 ug/L	G or SC	2/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0	<1.0 ug/L	G or SC	2/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0	<1.0 ug/L	G or SC	2/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0	<1.0 ug/L	G or SC	2/5 YR
91-94-1	3,3-Dichlorobenzidine	(4)	(5)	<15.2 ug/L	G or SC	2/5 YR
84-66-2	Diethyl phthalate	625	10.0	<7.6 ug/L	G or SC	2/5 YR
117-81-7	Di-2-Ethylhexyl Phthalate	625	10.0	<2.9 ug/L	G or SC	2/5 YR
131-11-3	Dimethyl phthalate	(4)	(5)	<7.6 ug/L	G or SC	2/5 YR
121-14-2	2,4-Dinitrotoluene	625	10.0	<2.9 ug/L	G or SC	2/5 Y
122-66-7	1,2-Diphenylhydrazine	(4)	(5)	<2.9 ug/L	G or SC	2/5 YR
206-44-0	Fluoranthene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
86-73-7	Fluorene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
118-74-1	Hexachlorobenzene	(4)	(5)	<2.9 ug/L	G or SC	2/5 YR
87-68-3	Hexachlorobutadiene	(4)	(5)	<2.9 ug/L	G or SC	2/5 YR
77-47-4	Hexachlorocyclopentadiene	(4)	(5)	<7.6 ug/L	G or SC	2/5 YR
67-72-1	Hexachloroethane	(4)	(5)	<2.9 ug/L	G or SC	2/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0	<1.4 ug/L	G or SC	2/5 YR
78-59-1	Isophorone	625	10.0	<2.9 ug/L	G or SC	2/5 YR
98-95-3	Nitrobenzene	625	10.0	<2.9 ug/L	G or SC	2/5 YR
62-75-9	N-Nitrosodimethylamine	(4)	(5)	<2.9 ug/L	G or SC	2/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	(5)	<2.9 ug/L	G or SC	2/5 YR
86-30-6	N-Nitrosodiphenylamine	(4)	(5)	<2.9 ug/L	G or SC	2/5 YR
129-00-0	Pyrene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0	<2.9 ug/L	G or SC	2/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
VOLATILES						
107-02-8	Acrolein	(4)	(5)	<30.0 ug/L	G	2/5 YR
107-13-1	Acrylonitrile	(4)	(5)	< 5.0 ug/L	G	2/5 YR
71-43-2	Benzene	624	10.0	<1.0 ug/L	G	2/5 YR
75-25-2	Bromoform	624	10.0	<2.0 ug/L	G	2/5 YR
56-23-5	Carbon Tetrachloride	624	10.0	<1.0 ug/L	G	2/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0	<1.0 ug/L	G	2/5 YR
124-48-1	Chlorodibromomethane	624	10.0	<1.0 ug/L	G	2/5 YR
67-66-3	Chloroform	624	10.0	<1.0 ug/L	G	2/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0	<1.0 ug/L	G	2/5 YR
75-27-4	Dichlorobromomethane	624	10.0	<1.0 ug/L	G	2/5 YR
107-06-2	1,2-Dichloroethane	624	10.0	<1.0 ug/L	G	2/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0	<1.0 ug/L	G	2/5 YR
156-60-5	1,2-trans-dichloroethylene	(4)	(5)	<1.0 ug/L	G	2/5 YR
78-87-5	1,2-Dichloropropane	(4)	(5)	<1.0 ug/L	G	2/5 YR
542-75-6	1,3-Dichloropropene	(4)	(5)	<1.0 ug/L	G	2/5 YR
100-41-4	Ethylbenzene	624	10.0	<1.0 ug/L	G	2/5 YR
74-83-9	Methyl Bromide	(4)	(5)	<2.0 ug/L	G	2/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	(4)	(5)	<1.0 ug/L	G	2/5 YR
127-18-4	Tetrachloroethylene	624	10.0	<1.0 ug/L	G	2/5 YR
10-88-3	Toluene	624	10.0	<1.0 ug/L	G	2/5 YR
79-00-5	1,1,2-Trichloroethane	(4)	(5)	<1.0 ug/L	G	2/5 YR
79-01-6	Trichloroethylene	624	10.0	<1.0 ug/L	G	2/5 YR
75-01-4	Vinyl Chloride	624	10.0	<2.0 ug/L	G	2/5 YR
ACID EXTRACTABLES [6]						
95-57-8	2-Chlorophenol	625	10.0	<7.6 ug/L	G or SC	2/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0	<7.6 ug/L	G or SC	2/5 YR
105-67-9	2,4 Dimethylphenol	625	10.0	<7.6 ug/L	G or SC	2/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMP FREQUE.
51-28-5	2,4-Dinitrophenol	(4)	(5)	<15.2 ug/L	G or SC	2/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	(5)	<7.6 ug/L	G or SC	2/5 YR
87-86-5	Pentachlorophenol	625	50.0	<15.2 ug/L	G or SC	2/5 YR
108-95-2	Phenol	625	10.0	<7.6 ug/L	G or SC	2/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0	<7.6 ug/L	G or SC	2/5 YR
MISCELLANEOUS						
	Ammonia as NH3-N	350.1	200	0.158 mg/L	C	2/5 YR
7782-50-5	Chlorine Produced Oxidant	(4)	(5)	Not Required	G	2/5 YR
7782-50-5	Chlorine, Total Residual	(4)	100	<0.01 mg/L	G	2/5 YR
57-12-5	Cyanide, Total	(4)	10.0	<0.0050 mg/L	G	2/5 YR
N/A	*E. coli* / *Enterococcus* (N/CML)	(4)	(5)	690 col/100ml	G	2/5 YR
7783-06-4	Hydrogen Sulfide	(4)	(5)	<1.0 mg/L	G or SC	2/5 YR
60-10-5	Tributyltin [7]	NBSR 85-3295	(5)	<0.012 ug/L	G or C	2/5 YR

Walter A. Legg / Environmental Site Manager

Name of Principal Exec. Officer or Authorized Agent/Title

01-10-2013

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

Analytical Results for

WO# 1004727

for

Tidewater, Inc.-MD

Project Manager: Ms. Sara McGarity

Project Name: STORMWATER PERMIT - Dahlgren

Anna G. Milliken
Technical Manager

ENCLOSURE (2)

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

January 7, 2013

Ms. Sara McGarity
Tidewater, Inc.-MD
7161 Columbia Gateway Drive
Suite C
Columbia, MD 21046

Certificate of Analysis

Project Name:	**NSF Dahlgren Stormwater**	Workorder:	**1004727**
Purchase Order:	**Dahlgren**	Workorder ID:	**NSF Dahlgren Stormwater**

Dear Ms. McGarity,

Enclosed are the analytical results for samples received by the laboratory on Friday, December 21, 2012.

The ALS Environmental laboratory in Middletown, Pennsylvania (formerly Analytical Laboratory Services, Inc.) is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Vicki Forney (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

CC: NAVFAC RCA Access, General Email Address

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

SAMPLE SUMMARY

Workorder: 1004727 NSF Dahlgren Stormwater Discard Date: 01/21/2013

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
1004727001	SW009	Water	12/20/12 21:22	12/21/12 18:55	Customer
1004727002	SW002	Water	12/20/12 21:15	12/21/12 18:55	Customer
1004727003	SW006	Water	12/20/12 20:58	12/21/12 18:55	Customer

Workorder Comments:

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 1004727 NSF Dahlgren Stormwater

Lab ID: **1004727001** Date Collected: 12/20/2012 21:22 Matrix: Water

Sample ID: **SW009** Date Received: 12/21/2012 18:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acrolein	<30.0		ug/L	30.0	EPA 624			12/27/12 07:52	DRS	A
Acrylonitrile	<5.0		ug/L	5.0	EPA 624			12/27/12 07:52	DRS	A
Benzene	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
Bromodichloromethane	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
Bromoform	<2.0		ug/L	2.0	EPA 624			12/27/12 07:52	DRS	A
Bromomethane	<2.0		ug/L	2.0	EPA 624			12/27/12 07:52	DRS	A
Carbon Tetrachloride	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
Chlorobenzene	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
Chlorodibromomethane	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
Chloroethane	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
2-Chloroethylvinyl ether	<2.0		ug/L	2.0	EPA 624			12/27/12 07:52	DRS	A
Chloroform	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
1,2-Dichlorobenzene	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
1,3-Dichlorobenzene	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
1,4-Dichlorobenzene	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
1,2-Dichloroethane	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
1,1-Dichloroethene	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
trans-1,2-Dichloroethene	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
1,2-Dichloropropane	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
1,3-Dichloropropene, Total	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
Ethylbenzene	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
Methylene Chloride	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
1,1,2,2-Tetrachloroethane	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
Tetrachloroethene	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
Toluene	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
1,1,2-Trichloroethane	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
Trichloroethene	<1.0		ug/L	1.0	EPA 624			12/27/12 07:52	DRS	A
Vinyl Chloride	<2.0		ug/L	2.0	EPA 624			12/27/12 07:52	DRS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	103		%	72-142	EPA 624			12/27/12 07:52	DRS	A
4-Bromofluorobenzene (S)	73.9		%	73-119	EPA 624			12/27/12 07:52	DRS	A
Dibromofluoromethane (S)	106		%	74-132	EPA 624			12/27/12 07:52	DRS	A
Toluene-d8 (S)	102		%	75-133	EPA 624			12/27/12 07:52	DRS	A
SEMIVOLATILES										
Acenaphthene	<1.4		ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Anthracene	<1.4		ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Benzidine	<47.6	1	ug/L	47.6	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Benzo(a)anthracene	<1.4		ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C

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ANALYTICAL RESULTS

Workorder: 1004727 NSF Dahlgren Stormwater

Lab ID: **1004727001** Date Collected: 12/20/2012 21:22 Matrix: Water

Sample ID: **SW009** Date Received: 12/21/2012 18:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Benzo(a)pyrene	<1.4		ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Benzo(b)fluoranthene	<1.4		ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Benzo(k)fluoranthene	<1.4		ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Butylbenzylphthalate	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
bis(2-Chloroethyl)ether	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
bis(2-Chloroisopropyl)ether	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
2-Chloronaphthalene	<2.9	2	ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
2-Chlorophenol	<7.6		ug/L	7.6	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Chrysene	<1.4		ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Di-n-Butylphthalate	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Dibenzo(a,h)anthracene	<1.4		ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
3,3-Dichlorobenzidine	<15.2		ug/L	15.2	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
2,4-Dichlorophenol	<7.6		ug/L	7.6	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Diethylphthalate	<7.6		ug/L	7.6	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
2,4-Dimethylphenol	<7.6		ug/L	7.6	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Dimethylphthalate	<7.6		ug/L	7.6	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
2,4-Dinitrophenol	<15.2		ug/L	15.2	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
2,4-Dinitrotoluene	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
1,2-Diphenylhydrazine	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
bis(2-Ethylhexyl)phthalate	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Fluoranthene	<1.4		ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Fluorene	<1.4	3	ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Hexachlorobenzene	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Hexachlorobutadiene	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Hexachlorocyclopentadiene	<7.6		ug/L	7.6	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Hexachloroethane	<2.9	4	ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Indeno(1,2,3-cd)pyrene	<1.4		ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Isophorone	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Kepone	0.0		ug/L		EPA 625 Appendix 9 Part A			1/1/13 05:12	DHF	C
2-Methyl-4,6-dinitrophenol	<7.6		ug/L	7.6	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Nitrobenzene	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
N-Nitrosodimethylamine	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
N-Nitroso-di-n-propylamine	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
N-Nitrosodiphenylamine	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Pentachlorophenol	<15.2		ug/L	15.2	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Phenol	<7.6		ug/L	7.6	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Pyrene	<1.4		ug/L	1.4	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
1,2,4-Trichlorobenzene	<2.9		ug/L	2.9	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
2,4,6-Trichlorophenol	<7.6		ug/L	7.6	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C

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ANALYTICAL RESULTS

Workorder: 1004727 NSF Dahlgren Stormwater

Lab ID: **1004727001** Date Collected: 12/20/2012 21:22 Matrix: Water

Sample ID: **SW009** Date Received: 12/21/2012 18:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	66.5		%	38-134	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
2-Fluorobiphenyl (S)	52.8		%	37-113	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
2-Fluorophenol (S)	34.4		%	17-73	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Nitrobenzene-d5 (S)	58.1		%	37-124	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Phenol-d5 (S)	20.3		%	11-53	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Terphenyl-d14 (S)	54.6		%	33-125	EPA 625	12/27/12	FPM	12/28/12 09:31	CGS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	67.4		%	40-125	EPA 625 Appendix 9 Part A	12/27/12	FPM	12/29/12 17:03	CGS	C
2-Fluorobiphenyl (S)	54.7		%	32-108	EPA 625 Appendix 9 Part A	12/27/12	FPM	12/29/12 17:03	CGS	C
2-Fluorophenol (S)	3.91	12	%	20-70	EPA 625 Appendix 9 Part A	12/27/12	FPM	12/29/12 17:03	CGS	C
Nitrobenzene-d5 (S)	57.5		%	31-110	EPA 625 Appendix 9 Part A	12/27/12	FPM	12/29/12 17:03	CGS	C
Phenol-d5 (S)	24.3		%	10-49	EPA 625 Appendix 9 Part A	12/27/12	FPM	12/29/12 17:03	CGS	C
Terphenyl-d14 (S)	67.2		%	27-136	EPA 625 Appendix 9 Part A	12/27/12	FPM	12/29/12 17:03	CGS	C
Pesticides and PCBs										
Aldrin	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
alpha-BHC	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
beta-BHC	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
gamma-BHC	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Chlordane	<0.50		ug/L	0.50	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
4,4'-DDD	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
4,4'-DDE	<0.025	5	ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
4,4'-DDT	<0.025	6	ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Dieldrin	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Endosulfan I	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Endosulfan II	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Endosulfan Sulfate	<0.025	7	ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Endrin	<0.025	8	ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Endrin Aldehyde	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G

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ANALYTICAL RESULTS

Workorder: 1004727 NSF Dahlgren Stormwater

Lab ID: **1004727001** Date Collected: 12/20/2012 21:22 Matrix: Water

Sample ID: **SW009** Date Received: 12/21/2012 18:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Heptachlor	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Heptachlor Epoxide	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Methoxychlor	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Mirex	<0.025		ug/L	0.025	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Toxaphene	<0.99		ug/L	0.99	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Aroclor-1016	<0.50		ug/L	0.50	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Aroclor-1221	<0.50		ug/L	0.50	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Aroclor-1232	<0.50		ug/L	0.50	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Aroclor-1242	<0.50		ug/L	0.50	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Aroclor-1248	<0.50		ug/L	0.50	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Aroclor-1254	<0.50		ug/L	0.50	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Aroclor-1260	<0.50		ug/L	0.50	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	115		%	30-150	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
Tetrachloro-m-xylene (S)	149	11	%	36-112	EPA 608	12/27/12	MDO	1/4/13 09:21	KJH	G
ORGANOPHOSPHORUS COMPOUNDS										
Azinphos Methyl	<0.98		ug/L	0.98	EPA 622	12/26/12	GEC	12/29/12 03:33	KJH	E
Chlorpyrifos	<0.98		ug/L	0.98	EPA 622	12/26/12	GEC	12/29/12 03:33	KJH	E
Demeton	<2.0		ug/L	2.0	EPA 622	12/26/12	GEC	12/29/12 03:33	KJH	E
Malathion	<2.0		ug/L	2.0	EPA 622	12/26/12	GEC	12/29/12 03:33	KJH	E
Parathion	<0.98		ug/L	0.98	EPA 622	12/26/12	GEC	12/29/12 03:33	KJH	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	126		%	50-143	EPA 622	12/26/12	GEC	12/29/12 03:33	KJH	E
WET CHEMISTRY										
Ammonia-N	0.158		mg/L	0.010	D6919-03			12/30/12 00:11	LMM	K
Chlorine, Total Residual	0.032J		mg/L	0.10	SM20-4500-Cl G			12/22/12 04:00	MSA	J
Cyanide, Total	<0.0050	9	mg/L	0.0050	EPA 335.4	12/26/12	SYB	12/28/12 12:00	KLR	L1
Hexavalent Chromium	<0.010	10	mg/L	0.010	SM21-3500-Cr B			12/22/12 07:30	MSA	J
Hydrogen Sulfide	<1.0		mg/L	1.0	SM20-4500S2H			1/7/13 10:49	JWB	M
pH	6.75		pH_Units		SM20-4500-H B			12/22/12 17:45	MSA	J
Specific Conductance	45		umhos/cm	1	SM20-2510 B			12/22/12 17:45	MSA	J
Sulfide, Total	<1.0		mg/L	1.0	SM20-4500S2F			12/26/12 07:30	LMM	M
METALS										
Antimony, Dissolved	<0.0020		mg/L	0.0020	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1
Arsenic, Dissolved	<0.0030		mg/L	0.0030	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 1004727 NSF Dahlgren Stormwater

Lab ID: **1004727001** Date Collected: 12/20/2012 21:22 Matrix: Water

Sample ID: **SW009** Date Received: 12/21/2012 18:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Cadmium, Dissolved	0.00034J		mg/L	0.0010	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1
Chromium, Dissolved	0.0039		mg/L	0.0020	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1
Copper, Dissolved	0.0050J		mg/L	0.0050	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1
Lead, Dissolved	0.0015J		mg/L	0.0020	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1
Mercury, Dissolved	0.00023		mg/L	0.00020	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1
Nickel, Dissolved	0.0021J		mg/L	0.0050	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1
Selenium, Dissolved	<0.0050		mg/L	0.0050	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1
Silver, Dissolved	<0.0020		mg/L	0.0020	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1
Thallium, Dissolved	0.00043J		mg/L	0.0010	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1
Zinc, Dissolved	0.046		mg/L	0.0050	EPA 200.8	1/1/13	MWO	1/2/13 00:11	MWO	I1

Sample Comments:

Kepone recovery was below criteria in the LCS associated with this sample.

The dissolved trivalent chromium was ND at 0.010 mg/L.

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 1004727 NSF Dahlgren Stormwater

PARAMETER QUALIFIERS\FLAGS

[1] The QC sample type LCS for method EPA 625 was outside the control limits for the analyte Benzidine. The % Recovery was reported as 0 and the control limits were 5 to 248.

[2] The QC sample type LCS for method EPA 625 was outside the control limits for the analyte 2-Chloronaphthalene. The % Recovery was reported as 51.2 and the control limits were 60 to 118.

[3] The QC sample type LCS for method EPA 625 was outside the control limits for the analyte Fluorene. The % Recovery was reported as 58.4 and the control limits were 59 to 121.

[4] The QC sample type LCS for method EPA 625 was outside the control limits for the analyte Hexachloroethane. The % Recovery was reported as 36.1 and the control limits were 40 to 113.

[5] The QC sample type MS for method EPA 608 was outside the control limits for the analyte 4,4'-DDE. The % Recovery was reported as 147 and the control limits were 61 to 132.

[6] The QC sample type MS for method EPA 608 was outside the control limits for the analyte 4,4'-DDT. The % Recovery was reported as 54.9 and the control limits were 58 to 140.

[7] The QC sample type MS for method EPA 608 was outside the control limits for the analyte Endosulfan Sulfate. The % Recovery was reported as 167 and the control limits were 36 to 148.

[8] The QC sample type MS for method EPA 608 was outside the control limits for the analyte Endrin. The % Recovery was reported as 225 and the control limits were 58 to 143.

[9] The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits.

[10] Analyte was analyzed past the 24 hour holding time.

[11] The surrogate Tetrachloro-m-xylene for method EPA 608 was outside of control limits. The % Recovery was reported as 149 and the control limits were 36 to 112. This result was reported at a dilution of 1.

[12] The surrogate 2-Fluorophenol for method EPA 625 Appendix 9 Part A was outside of control limits. The % Recovery was reported as 3.91 and the control limits were 20 to 70. This result was reported at a dilution of 1.

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 2

Courier:

Tracking #:

1004727

Co. Name: NAVFAC, NSF Dahlgren

Contact (Report to): Amanda Stella - NSF Dahlgren; Brenna White - NSF Dahlgren; Sara McGarity - Tidewater

Phone: 540-653-1683; 540-653-2341; 443-415-0839

Address: 18329 Thompson Road, Dahlgren, VA 22448

Bill to (if different than Report to): Tidewater

PO#:

Project Name/#: NSF Dahlgren Stormwater

ALS Quote #:

TAT: Normal-Standard TAT is 10 business days. / [X] Rush-Subject to ALS approval and surcharges.

Date Required: 3 JAN 2013

Approved By:

Email? [X] Y sara.mcgarity@tideh2o.net; amanda.stella@navy.mil

Fax? Y No.:

	Pesticides / PCBs (See "Attachment A" for method and QL)	Ammonia as NH_3-N EPA method 350.1 QL = 200 ug/L	Cyanide (see "Attachment A" for method) QL = 10 mg/L	VOCs (see "Attachment A" for methods and QL's)	~~E. coli, Enterococcus (see "Attachment A" for methods and QL)~~	~~Tributyltin Method NBSR 85-3295~~	Metals, dissolved (see "Attachment A" for EPA methods and QL's)	Hexavalent Chromium, dissolved (see "Attachment A" for EPA method and QL)	Method 622 (see Attachment A for parameters and QL's)	BNA + Appendix 9 (see "Attachment A" for parameters and QL's)
Container Type	AG	PL	PL	CG	~~PL~~	~~PL~~	PL	PL	AG	AG
Container Size	1L	500mL	500mL	40mL	~~X~~	~~1L~~	~~500mL~~ 1L	500mL	1L	1L
Preservative	NONE	H_2SO_4	NaOH	HCl	~~X~~	NONE	~~HNO3~~ NONE	NONE	NONE	NONE

ANALYSES/METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	G or C	Matrix	Pesticides/PCBs	Ammonia	Cyanide	VOCs	E. coli	Tributyltin	Metals, dissolved	Hexavalent Chromium	Method 622	BNA
1	SW009	All parameters in	20 Dec 2012	2122	G	SW	2	1	1	2	X	X	1	1	2	2
2		"Attachment A" must be														
3		reported. Methods and														
4		QL's listed in the														
5		Attachment must be														
6		used for analysis.														
7		Metals need to be filtered														
8																

Enter Number of Containers Per Analysis

Receipt Information (completed by Sample Custodian)

Cooler Temp: 3.

Therm. ID: IR-15

No. of Coolers:

Notes:

Correct containers? Y / Correct sample volume? Y / Correct preservation? Y / Headspace/Volatiles? Y

Custody seals Present? N / (If present) Seals intact? / Received on ice? Y / COC/Labels complete/accurate? Y / Container in good condition? Y

Circle appropriate Y or N.

SAMPLED BY (Please Print): Amanda Stella

LOGGED BY (signature): [signature] 12/22/12 1022

REVIEWED BY (signature): [signature] 12/27/12 1359

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	BARRY RANDALL	12/21	11:30	2	Anthony Speaks / HCS	12/21	11:30
3	Anthony Speaks	12/21	1422	4	[signature] ALS	12-21-12	1422
5	[signature]	12-21-12	1645	6	[signature]	12-21-12	1735
7	SKB	12-21-12	1855	8	[signature]	12/21	1855
9				10			

Data Deliverables: Standard / CLP-like / NJ-Reduced / NJ-Full / If yes, format type:

SDWA Forms?: yes / yes / yes / yes / Other

State Samples Collected In?: MD / NJ / NY / PA

DOD Criteria Required?

ALS FIELD SERVICES: [X] Pickup / Labor / Composite Sampling / Rental Equipment / Other:

* G=Grab; C=Composite

**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 6/2011

SW - Stormwater
QL - Quantification Level

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State Certifications: CT PH-0224, DE ID 11, GA 914, MA PA0102, MD 128, LA 04162, VA 421, WY EPA Region 8, WV 343

1004727

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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ALS SHADED AREAS MUST BE COMPLETED BY THE CLIENT/ SAMPLER. INSTRUCTIONS ON THE BACK

Page 2 of 2
Courier:
Tracking #:

Co. Name: NAVFAC, NSF Dahlgren
Contact (Report to): Amanda Stella - NSF Dahlgren; Brenna White - NSF Dahlgren; Sara McGarity - Tidewater
Phone: 540-653-1663; 540-653-2341; 443-415-0839
Address: 18329 Thompson Rd, Dahlgren, VA 22448
Bill to (if different than Report to): Tidewater
PO#:
Project Name/#: NSF Dahlgren Stormwater
ALS Quote #:
TAT: ☐ Normal-Standard TAT is 10 business days. ☒ Rush-Subject to ALS approval and surcharges.
Date Required: 3 JAN 2013
Approved By:
Email? Y: sara.mcgarity@tideh2o.net; amanda.stella@navy.mil
Fax? Y No:

***Container Type	PL	AG	PL
***Container Size	1L	250mL	1L
***Preservative	NONE	Zn Ace + NaOH	NONE

ANALYSES/METHOD REQUESTED: Hydrogen Sulfide (see "Attachment A" for methods and QL); Hydrogen Sulfide (see "Attachment A" for method and QL); Copper, dissolved QL= 5 ug/L

Enter Number of Containers Per Analysis

#	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Hydrogen Sulfide	Hydrogen Sulfide	Copper, dissolved
1	SW 009	See Attachment A Requirements	20 DEC 2012	2122	G	SW	1	2	
2	SW 002	Needs to be filtered	20 DEC 2012	2115	G	SW			1
3	SW 006	Needs to be filtered	20 DEC 2012	2058	G	SW			1
4									
5									
6									
7									
8									

Time on-site: 31 min

Receipt Information (completed by Sample Receipt): Cooler Temp: 3°; Therm. ID: TR-215; No. of Coolers:; Notes:

Correct containers? Y/N; Correct sample volume? Y/N; Correct preservation? Y/N; Headspace/Volatiles? Y/N; Circle appropriate Y or N.
Custody seals Present? Y/N; (if present) Seals intact? Y/N; Received on ice? Y/N; COC/Labels complete/accurate? Y/N; Container in good condition? Y/N

SAMPLED BY (Please Print): Amanda Stella
LOGGED BY (signature): [signature] 12/22/12 1022
REVIEWED BY (signature): [signature] 12/24/12 13:58

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature]	12/21	11:30	2	Anthony [illegible] / HCS	12/21	11:30
3	Anthony [illegible]	12/21	14:22	4	[signature] ALS	12/21/12	1422
5	[signature]	12-21-12	1645	6	[signature]	12-21-12	1734
7	[signature]	12-21-12	1855	8	[signature]	12/21	1855
9				10			

Data Deliverables: ☐ Standard ☐ CLP-like ☐ NJ-Reduced ☐ NJ-Full ☐ Other ☐ If yes, format type:
SDWA Forms? yes; State Samples Collected In? MD, NJ, NY, PA, Other
EDDs Required?
DOD Criteria Required?
ALS FIELD SERVICES: ☒ Pickup ☐ Labor ☐ Composite Sampling ☐ Rental Equipment ☐ Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass; PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz, etc. Preservative: HCl, HNO3, NaOH, etc.
Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY
Rev 6/2011

SW - Stormwater
QL - Quantification level

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ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
METALS						
7440-36-0	Antimony, dissolved	(3)	(3)		G or C	2/5 YR
7440-38-2	Arsenic, dissolved	(3)	(3)		G or C	2/5 YR
7440-43-9	Cadmium, dissolved	(3)	(3)		G or C	2/5 YR
16065-83-1	Chromium III, dissolved [6]	(3)	(3)		G or C	2/5 YR
18540-29-9	Chromium VI, dissolved [6]	(3)	(3)		G or C	2/5 YR
7440-50-8	Copper, dissolved	(3)	(3)		G or C	2/5 YR
7439-92-1	Lead, dissolved	(3)	(3)		G or C	2/5 YR
7439-97-6	Mercury, dissolved	(3)	(3)		G or C	2/5 YR
7440-02-0	Nickel, dissolved	(3)	(3)		G or C	2/5 YR
7782-49-2	Selenium, dissolved	(3)	(3)		G or C	2/5 YR
7440-22-4	Silver, dissolved	(3)	(3)		G or C	2/5 YR
7440-28-0	Thallium, dissolved	(4)	(5)		G or C	2/5 YR
7440-66-6	Zinc, dissolved	(3)	(3)		G or C	2/5 YR
PESTICIDES/PCB'S						
309-00-2	Aldrin	608	0.05		G or SC	2/5 YR
57-74-9	Chlordane	608	0.2		G or SC	2/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	622	(5)		G or SC	2/5 YR
72-54-8	DDD	608	0.1		G or SC	2/5 YR
72-55-9	DDE	608	0.1		G or SC	2/5 YR
50-29-3	DDT	608	0.1		G or SC	2/5 YR
8065-48-3	Demeton	(4)	(5)		G or SC	2/5 YR
60-57-1	Dieldrin	608	0.1		G or SC	2/5 YR
959-98-8	Alpha-Endosulfan	608	0.1		G or SC	2/5 YR
33213-65-9	Beta-Endosulfan	608	0.1		G or SC	2/5 YR
1031-07-8	Endosulfan Sulfate	608	0.1		G or SC	2/5 YR
72-20-8	Endrin	608	0.1		G or SC	2/5 YR

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CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMP FREQUE
111-44-4	Bis 2-Chloroethyl Ether	(4)	(5)		G or SC	2/5 YR
39638-32-9	Bis 2-Chloroisopropyl Ether	(4)	(5)		G or SC	2/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0		G or SC	2/5 YR
91-58-7	2-Chloronaphthalene	(4)	(5)		G or SC	2/5 YR
218-01-9	Chrysene	625	10.0		G or SC	2/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0		G or SC	2/5 YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0		G or SC	2/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0		G or SC	2/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0		G or SC	2/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0		G or SC	2/5 YR
91-94-1	3,3-Dichlorobenzidine	(4)	(5)		G or SC	2/5 YR
84-66-2	Diethyl phthalate	625	10.0		G or SC	2/5 YR
117-81-7	Di-2-Ethylhexyl Phthalate	625	10.0		G or SC	2/5 YR
131-11-3	Dimethyl phthalate	(4)	(5)		G or SC	2/5 YR
121-14-2	2,4-Dinitrotoluene	625	10.0		G or SC	2/5 YR
122-66-7	1,2-Diphenylhydrazine	(4)	(5)		G or SC	2/5 YR
206-44-0	Fluoranthene	625	10.0		G or SC	2/5 YR
86-73-7	Fluorene	625	10.0		G or SC	2/5 YR
118-74-1	Hexachlorobenzene	(4)	(5)		G or SC	2/5 YR
87-68-3	Hexachlorobutadiene	(4)	(5)		G or SC	2/5 YR
77-47-4	Hexachlorocyclopentadiene	(4)	(5)		G or SC	2/5 YR
67-72-1	Hexachloroethane	(4)	(5)		G or SC	2/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0		G or SC	2/5 YR
78-59-1	Isophorone	625	10.0		G or SC	2/5 YR
98-95-3	Nitrobenzene	625	10.0		G or SC	2/5 YR
62-75-9	N-Nitrosodimethylamine	(4)	(5)		G or SC	2/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	(5)		G or SC	2/5 YR
86-30-6	N-Nitrosodiphenylamine	(4)	(5)		G or SC	2/5 YR
129-00-0	Pyrene	625	10.0		G or SC	2/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0		G or SC	2/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMP FREQUE.
51-28-5	2,4-Dinitrophenol	(4)	(5)		G or SC	2/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	(5)		G or SC	2/5 YR
87-86-5	Pentachlorophenol	625	50.0		G or SC	2/5 YR
108-95-2	Phenol	625	10.0		G or SC	2/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0		G or SC	2/5 YR
	MISCELLANEOUS					
	Ammonia as NH3-N	350.1	200		C	2/5 YR
7782-50-5	Chlorine Produced Oxidant	(4)	(5)		G	2/5 YR
7782-50-5	Chlorine, Total Residual	(4)	100		G	2/5 YR
57-12-5	Cyanide, Total	(4)	10.0		G	2/5 YR
N/A	*E. coli* / *Enterococcus* (NI/CML)	(4)	(5)		G	2/5 YR
7783-06-4	Hydrogen Sulfide	(4)	(5)		G or SC	2/5 YR
60-10-5	Tributyltin [7]	NBSR 85-3295	(5)		G or C	2/5 YR

Name of Principal Exec. Officer or Authorized Agent/Title

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

(6) Testing for phenol requires continuous extraction.

(7) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].

(8) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].

(9) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270D

January 9, 2013 Analytical Report for Service Request No: K1212771

Sara McGarity
Tidewater, Inc.
7161 Columbia Gateway Dr. Suite C
Columbia, MD 21046

RE: NSF Dahlgren Stormwater

Dear Sara:

Enclosed are the results of the sample submitted to our laboratory on December 22, 2012. For your reference, these analyses have been assigned our service request number K1212771.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3375. You may also contact me via Email at Janet.Malloch@alsglobal.com.

Respectfully submitted,

Columbia Analytical Services, Inc. dba ALS Environmental

Janet Malloch
Project Manager

JM/mj

Columbia Analytical Services
ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 FAX +1 360 636 1068
Columbia Analytical Services, Inc.
Part of the ALS Group A Campbell Brothers Limited Company
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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
Indiana DOH	http://www.in.gov/isdh/24859.htm	C-WA-01
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Louisiana DHH	Not available	LA110003
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-368
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
New Mexico ED	http://www.nmenv.state.nm.us/dwb/Index.htm	-
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.caslab.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.caslab.com or at the accreditation bodies web site

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALS Environmental

Ship to: 34 Dogwood Lane • Middletown, PA 17057 • 717 944 5541 • Fax: 717 944 1430

Page 1 of 1

Courier:

Tracking #:

K1212771

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Co. Name: NAVFAC NSF DAHLGREN

Contact (Report to): Amanda Stella, Dahlgren — **Phone:** 540-653-1683

Brenna White, Dahlgren — 540-653-2341

Address: Sara McGarity, Tidewater — 443-415-8839

18329 Thompson Rd

Dahlgren, VA 22448

Bill to (if different than Report to): Tidewater — **PO#:**

Project Name/#: NSF Dahlgren Stormwater **ALS Quote #:**

TAT: [ ] Normal-Standard TAT is 10 business days. **Date Required:** 3 Jan 2013

[X] Rush-Subject to ALS approval and surcharges. **Approved By:**

Email? [X] Y amanda.stella@navy.mil; sara.mcgarity@tidewater.net

Fax? [ ] Y No.

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	***Container Type	***Container Size	*** Preservative	Tributyltin (NB52.65-3295)	Enter Number of Containers Per Analysis
1 SW 009	Refer to "Attachment A" for method and Quantification level Requirements"	20 Dec 2012	2122	G	SW	PL	1L	NONE		2
2										
3										
4										
5										
6										
7										
8										

Receipt Information (completed by Sample Receiver)

Performed by: INITIAL HERE

Cooler Temp:

Therm. ID:

No. of Coolers:

Notes:

Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N
N Y	N Y	N Y	N Y	

Custody seals Present?	(If present) Seals intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?
N Y	N Y	N Y	N Y	N Y

SAMPLED BY (Please Print): Amanda Stella

LOGGED BY(signature): Date: Time:

REVIEWED BY(signature): Date: Time:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 BARRY RANDALL	12/21	11:30	2 Anthony Seals/H(S	12/21	11:30
3 Anthony Seals	12/21	1422	4 [illegible]	12/21	1622
5			6 [illegible]	12/21	1820
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] [illegible]

EDDs Required? [ ] If yes, format type:

SDWA Forms?=> yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other

DOD Criteria Required?

ALS FIELD SERVICES

[ ] Pickup

[ ] Labor

[ ] Composite Sampling

[ ] Rental Equipment

[ ] Other:

* G=Grab; C=Composite

**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 6/2011

PC JM

Cooler Receipt and Preservation Form

Client / Project: Tidewater Service Request K12 12771

Received: 12/22/12 Opened: 12/22/12 By: JA Unloaded: 12/22/12 By: JA

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where?_____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Temp	Corr. Temp	Raw Blank	Corr. Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
1.4	1.1	NA	NA	-0.3	359		794377439430	

7. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* Paper
8. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
15. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

*Notes, Discrepancies, & Resolutions:*_____

Attachment H

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMP FREQUE
51-28-5	2,4-Dinitrophenol	(4)	(5)		G or SC	2/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	(5)		G or SC	2/5 YR
87-86-5	Pentachlorophenol	625	50.0		G or SC	2/5 YR
108-95-2	Phenol	625	10.0		G or SC	2/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0		G or SC	2/5 YR
MISCELLANEOUS						
	Ammonia as NH3-N	350.1	200		C	2/5 YR
7782-50-5	Chlorine Produced Oxidant	(4)	(5)		G	2/5 YR
7782-50-5	Chlorine, Total Residual	(4)	100		G	2/5 YR
57-12-5	Cyanide, Total	(4)	10.0		G	2/5 YR
N/A	*E. coli* / *Enterococcus* (N/CML)	(4)	(5)		G	2/5 YR
7783-06-4	Hydrogen Sulfide	(4)	(5)		G or SC	2/5 YR
60-10-5	Tributyltin [7]	NBSR 85-3295	(5)		G or C	2/5 YR

Name of Principal Exec. Officer or Authorized Agent/Title

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

(6) Testing for phenol requires continuous extraction.

(7) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].

(8) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].

(9) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270D

Client:	Tidewater, Inc.	**Service Request:**	K1212771
Project:	NSF Dahlgren Stormwater	**Date Collected:**	12/20/2012
Sample Matrix:	Water	**Date Received:**	12/22/2012

Butyltins (as cation)

Sample Name:	SW009	**Units:**	ug/L
Lab Code:	K1212771-001	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	0.050	0.012	1	12/26/12	12/31/12	KWG1215126	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	108	31-137	12/31/12	Acceptable

Comments:

Client:	Tidewater, Inc.	**Service Request:**	K1212771
Project:	NSF Dahlgren Stormwater	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Butyltins (as cation)

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1215126-4	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	Krone		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tri-n-butyltin Cation	ND	U	0.050	0.012	1	12/26/12	12/31/12	KWG1215126	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tri-n-propyltin	122	31-137	12/31/12	Acceptable

Comments:

Client: Tidewater, Inc. **Service Request:** K1212771
Project: NSF Dahlgren Stormwater
Sample Matrix: Water

Surrogate Recovery Summary
Butyltins (as cation)

Extraction Method: EPA 3520C **Units:** PERCENT
Analysis Method: Krone **Level:** Low

Sample Name	Lab Code	Sur1
SW009	K1212771-001	108
Method Blank	KWG1215126-4	122
SW009MS	KWG1215126-1	102
SW009DMS	KWG1215126-2	95
Lab Control Sample	KWG1215126-3	101

Surrogate Recovery Control Limits (%)

Sur1 =	Tri-n-propyltin	31-137

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client:	Tidewater, Inc.	**Service Request:**	K1212771
Project:	NSF Dahlgren Stormwater	**Date Extracted:**	12/26/2012
Sample Matrix:	Water	**Date Analyzed:**	12/31/2012

Matrix Spike/Duplicate Matrix Spike Summary
Butyltins (as cation)

Sample Name:	SW009	**Units:**	ug/L
Lab Code:	K1212771-001	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	Krone	**Extraction Lot:**	KWG1215126

		SW009MS KWG1215126-1 Matrix Spike			SW009DMS KWG1215126-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Tri-n-butyltin Cation	ND	0.350	0.446	78	0.318	0.446	71	17-142	9	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Tidewater, Inc.	**Service Request:**	K1212771
Project:	NSF Dahlgren Stormwater	**Date Extracted:**	12/26/2012
Sample Matrix:	Water	**Date Analyzed:**	12/31/2012

Lab Control Spike Summary
Butyltins (as cation)

Extraction Method:	EPA 3520C	**Units:**	ug/L
Analysis Method:	Krone	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1215126

	Lab Control Sample KWG1215126-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Tri-n-butyltin Cation	0.321	0.446	72	32-122

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Fredericktowne Labs Inc.
ENVIRONMENTAL TESTING
3020 Ventrie Court • P.O. BOX 245 • Myersville, MD 21773 • 800-332-3340 • FAX 301-293-2366
www.fredericktownelabs.com • info@fredericktownelabs.com

Analysis Results

Account No.: 6199 - 612-11

NSF Dahlgren

Date Received: Friday, December 21, 2012
Collected By: Amanda Stella

Date Reported: Wednesday, December 26, 2012

Matrix: Waste Water

Lab#	Parameter	Result	Limit of Detection	Method	Start Date	Start Time	End Date	End Time	Analyst
Source: - SW 002 Storm water	Type: Grab	Collection Date: 12/20/2012 -							
6199-612-11-1	E. Coli	**690/100ml**	1/100ml	9223B	12/21/12	15:50	12/22/12	15:30	PH

Notes:
1. mg/l stands for milligrams per liter and is nearly synonymous with parts per million
   ug/l stands for micrograms per liter and is nearly synonymous with parts per billion
2. < stands for "less than" and indicates that the component in question was not detected (i.e. was less than the detection limit)
3. All analyses performed using EPA accepted methods in accordance with Title 40 Code of Federal Regulations Part 136. Method references are per: (1) Methods for the Chemical Analysis of Water & Wastewater EPA-600/4-79-020, (2) Standard Methods for the Examination of Water & Wastewater – AWWA 18th ed., (3) Test Methods for Evaluating Solid Waste – EPA SW-846.
4. "*" denotes an analysis that was subcontracted to a State of Maryland approved lab.

Verified by: _____
M. L. Miller, Ph.D.
Laboratory Director

Fredericktowne Labs is a State Certified Water Quality Laboratory
MD Cert. No.: 116 VA Cert. No.: 444
MDOT WBE Cert. No.: 91-158

JD - Recurring for client

6199-612-11

Chain of Custody / Sample Information Form

Naval Support Facility, Dahlgren, 18329 Thompson Road, Suite 226, Dahlgren, VA 22448-5100, Ph: 540-653-2341

COC NUMBER: ST08541

Lab Used: Fredericktowne

Project Name/No. NSF Dahlgren Stormwater ~~Sewage Treatment Plant - VPDES VA0091067~~

PRIORITY? (yes) / no

RESULTS DUE BY: 03 Jan 2013

Type (G= grab) C= composite; 24HC=24 Hour Composite; 8HC = 8 Hour Composite

SAMPLER NAME: Amanda Stella

NSA POC: Same

COPY TO: Sara McGarity (Tidewater) Amanda Stella

Sample No.	Matrix/ Type	Location/Composite Time	No. of Containers	Analysis Required: E. Coli / Enterococcus	Date/Time Taken	Container Description/ Preservation Status
SW 002 ~~ST08541-1~~	Grab Storm-water	SW 002	1	X	20 Dec 2012 2122	PL (Sterile) / $Na_2S_2O_3$
ST08541-2						
ST08541-3						
ST08541-4						
ST08541-5						
ST08541-6						

Transferred by:	Received By:	Date:	Time:
[signature]	Anthony Speedy	12/21/12	11:30
[signature]	Dan Staley	12/21/12	1537

Comments: Sample Iced 3.0°C

FOR CONTRACT LAB USE ONLY:

Samples received on wet ice?	Y	N	N/A
Samples preserved correctly?	Y	N	N/A
VOAs have zero headspace?	Y	N	N/A

Form Revised 05/09

Stella, Amanda B CIV NAVFAC Washington, EV

From: Stella, Amanda B CIV NAVFAC Washington, EV
Sent: Friday, December 16, 2011 10:09 AM
To: 'Mackert, Susan (DEQ)'
Cc: White, Brenna M CIV NAVFAC Washington
Subject: RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis
Signed By: amanda.stella@navy.mil

Hi Susan,

Per our telephone conversation today, we will plan to sample for total residual chlorine only. We will take our own measurement in the field, using our potable water chlorine meter.

Thanks again and have a great holiday!

Amanda B. Stella
Water Media Manager
Naval Support Facility, Dahlgren
Environmental Division

Telephone:(540) 653-1683
Fax: (540) 653-6242

-----Original Message-----
From: Mackert, Susan (DEQ) [mailto:Susan.Mackert@deq.virginia.gov]
Sent: Thursday, December 15, 2011 7:17
To: Stella, Amanda B CIV NAVFAC Washington, EV
Subject: RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Good Morning Ms. Stella,

In speaking with Central Office, staff indicated that CPO was going to be removed from the Attachment A sampling requirements. Given that information, we decided that Dahlgren does not need to sample for CPO.

If you have any questions, please feel free to contact me.

Regards,
Susan

Susan Mackert
Water Permit Writer, Senior II
Regional Industrial Storm Water Coordinator
Certified Erosion and Sediment Control Inspector #2804
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3853
Fax: (703) 583-3821
susan.mackert@deq.virginia.gov

ENCLOSURE (3)

-----Original Message-----
From: Stella, Amanda B CIV NAVFAC Washington, EV
[mailto:amanda.stella@navy.mil]
Sent: Wednesday, December 14, 2011 7:13 AM
To: Cunningham, Frederick (DEQ)
Cc: White, Brenna M CIV NAVFAC Washington; Mackert, Susan (DEQ)
Subject: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Mr. Cunningham,

I have been in contact with Universal Laboratories to determine their ability to analyze Chlorine Produced Oxidant (CPO) in accordance with Attachment A of our VPDES Permit (VA0073636). Attachment A of our permit indicates we must sample for CPO and total residual chlorine. Both have the same CAS number (CAS 7782-50-5), indicating they are the same compound. The discharge from our outfall is freshwater/stormwater, though it is adjacent to a covered salt dome. Mr. Geoff Hinshelwood at Universal Laboratory indicated that he had a telephone discussion with you regarding CPO versus Total residual chlorine and thought it best if I contact you directly. From speaking with Mr. Hinshelwood, it appears that CPO and total residual chlorine are analyzed by the same method (SM 4500 CL), and the only difference is that in salt water the test is measuring hydrobromus acid and in fresh water it is measuring hydrochlorous acid. Could you please confirm if this is true? Also, if we are required to analyze for CPO, are the units reported out differently for CPO verses total residual chlorine?

Thank you in advance for your assistance.

Very Respectfully,

Amanda B. Stella
Water Media Manager
Naval Support Facility, Dahlgren
Environmental Division

Telephone:(540) 653-1683
Fax: (540) 653-6242

Stella, Amanda B CIV NAVFAC Washington, EV

From: Mackert, Susan (DEQ) [Susan.Mackert@deq.virginia.gov]
Sent: Thursday, December 15, 2011 7:17 AM
To: Stella, Amanda B CIV NAVFAC Washington, EV
Subject: RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Good Morning Ms. Stella,

In speaking with Central Office, staff indicated that CPO was going to be removed from the Attachment A sampling requirements. Given that information, we decided that Dahlgren does not need to sample for CPO.

If you have any questions, please feel free to contact me.

Regards,
Susan

Susan Mackert
Water Permit Writer, Senior II
Regional Industrial Storm Water Coordinator Certified Erosion and Sediment Control Inspector #2804 Virginia Department of Environmental Quality Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3853
Fax: (703) 583-3821
susan.mackert@deq.virginia.gov

-----Original Message-----
From: Stella, Amanda B CIV NAVFAC Washington, EV [mailto:amanda.stella@navy.mil]
Sent: Wednesday, December 14, 2011 7:13 AM
To: Cunningham, Frederick (DEQ)
Cc: White, Brenna M CIV NAVFAC Washington; Mackert, Susan (DEQ)
Subject: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Mr. Cunningham,

I have been in contact with Universal Laboratories to determine their ability to analyze Chlorine Produced Oxidant (CPO) in accordance with Attachment A of our VPDES Permit (VA0073636). Attachment A of our permit indicates we must sample for CPO and total residual chlorine. Both have the same CAS number (CAS 7782-50-5), indicating they are the same compound. The discharge from our outfall is freshwater/stormwater, though it is adjacent to a covered salt dome. Mr. Geoff Hinshelwood at Universal Laboratory indicated that he had a telephone discussion with you regarding CPO versus Total residual chlorine and thought it best if I contact you directly. From speaking with Mr. Hinshelwood, it appears that CPO and total residual chlorine are analyzed by the same method (SM 4500 CL), and the only difference is that in salt water the test is measuring hydrobromus acid and in fresh water it is measuring hydrochlorous acid. Could you please confirm if this is true? Also, if we are

required to analyze for CPO, are the units reported out differently for CPO verses total residual chlorine?

Thank you in advance for your assistance.

Very Respectfully,

Amanda B. Stella
Water Media Manager
Naval Support Facility, Dahlgren
Environmental Division

Telephone:(540) 653-1683
Fax: (540) 653-6242

Client Bulletin

Ammonia in Non-potable Water

Effective January 28, 2008, Analytical Laboratory Services, Inc. (ALSI) will be using a new analytical method for the determination of Ammonia-Nitrogen in non-potable water according to *ASTM Method D6919-03—Standard Test Method for Determination of Dissolved Alkali and Alkaline Earth Cations and Ammonium in Water and Wastewater by Ion Chromatography*. ALSI has obtained the proper NELAC certification for this method, which was recently approved under the Method Update Rule (MUR) and is listed in 40 CFR Part 136 as an approved method for ammonia-nitrogen. (See ALSI website for a listing of the MUR).

After performing method development and comparative studies of both the current analytical method and the new ASTM method on actual client samples, there were no differences observed in the analytical results. From the clients perspective on both the collection and the reporting end you should note little change. The method allows for more efficiency in our departments and reduces manual technician input thus reducing potential human error at the bench top. The ALSI staff believe this method will offer more stability and efficiency to our clients and will now be the preferred analytical method for non-potable water.

Due to the change in technique and method, only the method reference will be different on the analytical report for those samples received at the laboratory after the date of January 28, 2008. With regard to the costs of either analysis, we are pleased to note that all pricing for our clients will remain unchanged during this transition. The reporting limit of this method will remain the same—0.10 mg/l—and the collection bottle/preservative will remain unchanged as follows:

Method	Matrix	Container	Amount	Preservative	Holding Time
ASTM D6919-03	Nonpotable Water	P or G	500mL	H2SO4 pH<2;Cool 4°C	28 days

If you have any questions regarding this method or its affect on your submitted samples, please contact your project coordinator at 717-944-5541.

Susan Baer—Ext. 3104
De Brooks—Ext. 3131
Tonya Hironimus—Ext. 3108
Judy Kester—Ext. 3132
John Klingaman—717.505.5280

Analytical Laboratory Services, Inc.

ENCLOSURE (4)

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 122, 136, 141, 143, 430, 455, and 465

[EPA-HQ-OW-2003-0070; FRL-]

RIN 2040-AD71

Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; National Primary Drinking Water Regulations; and National Secondary Drinking Water Regulations; Analysis and Sampling Procedures

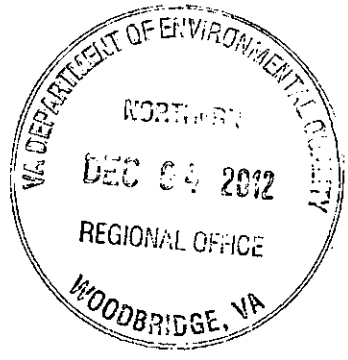
AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This rule modifies the testing procedures approved for analysis and sampling under the Clean Water Act and Safe Drinking Water Act. EPA proposed these changes for public comment on August 18, 2003 and April 6, 2004. The Clean Water Act changes adopted in this final rule fall into the following categories: new vendor-developed methods as well as EPA and voluntary consensus standard bodies (VCSB) methods, updated versions of currently approved methods, revisions to method modification and analytical requirements, withdrawal of certain outdated methods, and changes to sample collection, preservation, and holding time requirements. This rule also changes regulations under the Safe Drinking Water Act that establish drinking water sampling and analysis procedures. The changes include approval of vendor-developed methods, new EPA and VCSB methods, updated VCSB methods, and approval of a modification to the test kit used with Syngenta Method AG-625 that restricts its use in certain circumstances. The addition of new and updated methods to the wastewater and drinking water regulations provides increased flexibility to the regulated community and laboratories in the selection of analytical methods.

DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY
SOUTH POTOMAC
6509 SAMPSON ROAD SUITE 217
DAHLGREN, VIRGINIA 22448-5108

IN REPLY REFER TO
5090
Ser PRSD41BW/099



Ms. Susan D. Mackert
VPDES Water Permit Writer
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193

Dear Ms. Mackert:

SUBJECT: REISSUANCE OF VPDES PERMIT NO. VA0073636

Naval Support Activity South Potomac (NSASP), is submitting two complete copies of an application for the renewal of the Naval Support Facility, Dahlgren, Virginia Pollutant Discharge Elimination System (VPDES) Minor Industrial Storm Water Permit Number VA0073636, as Enclosures (1) through (9).

NSASP requests waivers from EPA Forms 2C (V.) and 2F (VII.) pollutant analysis beyond those pollutants already monitored and required by the current permit. The discharge from all outfalls is storm water or storm water associated with minor industrial activity, which would not affect the parameters BOD, COD, TOC, Ammonia, O&G, TN, TP, and TSS.

Requests for changes to permit monitoring parameters are included in Enclosure (4) with the relevant outfall descriptions.

Please direct all correspondence to:

ATTN: Director, Environmental Division
Department of the Navy
NAVFAC Washington, PWD South Potomac
18329 Thompson Road, Suite 226
Dahlgren, Virginia 22448-5110

5090
Ser PRSD41BW/099

For further information, please contact Ms. Brenna White, Code PRSD41BW, at (540) 653-2341.

Sincerely,

JEFFREY C. BOSSART
By direction

Enclosures:
1. General Form 1
2. Map for General Form 1, XI
3. Form 2C (for Outfalls 002, 003, 004, and 007)
4. Additional Information, Form 2C, II, B & Form 2F, IV, B
5. Form 2F (For Outfalls: 002, 003, 004, 006, 007, 009, 012, and 013)
6. Drainage Map of Pumpkin Neck, for Form 2F, III
7. Drainage Map of Mainside NSF Dahlgren, for Form 2F, III
8. VPDES Permit Application Addendum
9. Billing Information for Public Notice

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: F VA7170024684

LABEL ITEMS	PLEASE PLACE LABEL IN THIS SPACE
I. EPA I.D. NUMBER	
III. FACILITY NAME	
V. FACILITY MAILING ADDRESS	
VI. FACILITY LOCATION	

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X	
B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		X
D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	X		N/A
F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X	
H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	
J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	

III. NAME OF FACILITY

1 SKIP: NAVAL SUPPORT FACITLITY (NSF) DAHLGREN

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 WHITE, BRENNA, WATER MEDIA MANAGER	(540) 653-2341

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 18329 Thompson Road, Suite 226

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 DAHLGREN	VA	22448

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 2 MILES EAST OF ROUTE 301 & 206

B. COUNTY NAME: KING GEORGE

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 DAHLGREN	VA	22448	

CONTINUE ON REVERSE

ENCLOSURE (1)

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
9711 (specify) NATIONAL SECURITY	(specify)

C. THIRD	D. FOURTH
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME: UNITED STATES DEPARTMENT OF THE NAVY

B. Is the name listed in Item VIII-A also the owner? ☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box; if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

F (specify) US DEPT. OF NAVY

D. PHONE *(area code & no.)*: A (540) 653-2341

E. STREET OR P.O. BOX: 18329 THOMPSON ROAD, SUITE 226

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
DAHLGREN	VA	22448	Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
9 N VA0073636	9 P 40307
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
9 U	9 VA0021067 (specify) WASTEWATER DISCHARGE PERMIT
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
9 R VA7170024684	9 VAN010041 (specify) GENERAL PERMIT FOR TOTAL NITROGEN AND TOTAL PHOSPHORUS DISCHARGES AND NUTRIENT TRADING IN THE CHESAPEAKE WATERS

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

Naval Support Facility (NSF) Dahlgren is used for Defense Research and Development by several Navy and Defense Commands. Facilities on Mainside are used primarily for support (e.g., public works, supply, etc.), administration, research and development, housing, and community support activities. Mainside also contains areas used for air operations and areas where a variety of ordnance categories are tested. Pumpkin Neck contains areas used for a variety of ordnance testing.

XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
Jeffrey C. Bossart By direction of Commanding Officer	Jeffrey C Bossart	03 December 2012

COMMENTS FOR OFFICIAL USE ONLY

EPA Form 3510-1 (8-90)

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA7170024684

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM 2C NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
002	38	19	15	77	01	30	UPPER MACHODOC CREEK
003	38	19	45	77	01	15	UPPER MACHODOC CREEK
004	38	19	15	77	02	00	UPPER MACHODOC CREEK
007	38	20	00	77	01	00	GAMBO CREEK

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
002	MAIN RANGE		SEE ENCLOSURE (4)		
	STORM WATER / GROUND WATER	0.00725 MG,		4	A
	GUN MOUNT SUMP	CALC. FLOW 0.10" RAIN EVENT			
003	NORTH MAIN RANGE		SEE ENCLOSURE (4)		
	STORM WATER / GROUND WATER	0.00833 MG		4	A
	GUN MOUNT SUMP	CALC. FLOW 0.10" RAIN EVENT			
004	STORMWATER POND (NAMED COOLING POND)		OIL WATER SEPARATOR FOR TRANSPORTATION RUNOFF	1	H
	STORM WATER / GROUND WATER	0.175 MG	SEE ENCLOSURE (4)	4	A
		CALC. FLOW 0.10" RAIN EVENT			
007	TERMINAL RANGE		SEE ENCLOSURE (4)		
	STORM WATER / GROUND WATER	0.005167 MG		4	A
	GUN MOUNT SUMP	CALC. FLOW 0.10" RAIN EVENT			

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

ENCLOSURE (3)

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES (*complete the following table*) ☑ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK (*specify average*)	b. MONTHS PER YEAR (*specify average*)	a. FLOW RATE (*in mgd*)		B. TOTAL VOLUME (*specify with units*)		C. DURATION (*in days*)
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
N/A								

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES (*complete Item III-B*) ☑ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☐ YES (*complete Item III-C*) ☑ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (*list outfall numbers*)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	
N/A			

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED
N/A					

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA7170024684

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided. NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
TPH (monitoring currently required by permit at outfalls 002, 003, 004 & 007) 3-year MAX data for TPH: 002 max TPH = 1.1 mg/L 003 max TPH = 12 mg/L 004 max TPH = <QL 007 max TPH = <QL	General mechanical and machine activity such as vehicle use and storage and sump pumps.		
Cu, dissolved (monitoring currently required by permit at outfall 002) 002 most recent Cu = 8.1 ug/L	Exposed metals storage and minute particulate deposition from range activity.		

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

N/A

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☑ YES (*identify the test(s) and describe their purposes below*) ☐ NO (*go to Section VIII*)

16 NOVEMBER 2011 BIOLOGICAL ACUTE TOXICITY TESTING WAS PREFORMED AT OUTFALLS 002 AND 006 ACCORDING TO VPDES PERMIT NO. VA0073636 REQUIREMENTS. 48-HOUR LC50 WAS > 100%.

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
Coastal Bioanalysts, Inc.	6400 Enterprise Court Gloucester, VA 23061	(804) 694-8285	48-Hour Acute Biological Toxicity
Tidewater Inc.	7161 Columbia Gateway Drive - Suite C Columbia, MD 21046	(410) 997 4458 x 157	TPH, TSS, Cu

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
Jeffrey C. Bossart (By direction of the Commanding Officer)	(301) 744 - 4705
C. SIGNATURE	D. DATE SIGNED
Jeffrey C Bossart	03 December 2012

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA7170024684

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 002

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCENTRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	N/A											
b. Chemical Oxygen Demand (*COD*)	N/A											
c. Total Organic Carbon (*TOC*)	N/A											
d. Total Suspended Solids (*TSS*)	N/A											
e. Ammonia (*as N*)	N/A											
f. Flow	VALUE 0.014		VALUE N/A		VALUE 0.0095		3	10^6 Gal	N/A	VALUE N/A		N/A
g. Temperature (*winter*)	VALUE 18.0		VALUE N/A		VALUE N/A		1	°C		VALUE N/A		N/A
h. Temperature (*summer*)	VALUE 25.3		VALUE N/A		VALUE N/A		1	°C		VALUE N/A		N/A
i. pH	MINIMUM 6.30	MAXIMUM 6.90	MINIMUM N/A	MAXIMUM N/A			3	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)		X												

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X												
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)		X												
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)		X												
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)		X												
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

CONTINUE ON PAGE V-3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA7170024684	002

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X												
2M. Arsenic, Total (7440-38-2)			X												
3M. Beryllium, Total (7440-41-7)			X												
4M. Cadmium, Total (7440-43-9)			X												
5M. Chromium, Total (7440-47-3)			X												
6M. Copper, Total (7440-50-8)			X												
7M. Lead, Total (7439-92-1)			X												
8M. Mercury, Total (7439-97-6)			X												
9M. Nickel, Total (7440-02-0)			X												
10M. Selenium, Total (7782-49-2)			X												
11M. Silver, Total (7440-22-4)			X												
12M. Thallium, Total (7440-28-0)			X												
13M. Zinc, Total (7440-66-6)			X												
14M. Cyanide, Total (57-12-5)			X												
15M. Phenols, Total			X												
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (*Chloromethyl*) Ether (542-88-1)				***DELISTED***	***02-4-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)				***DELISTED***	***01-8-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V. Tetrachloroethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloroethane (71-55-6)			X												
28V. 1,1,2-Trichloroethane (79-00-5)			X												
29V Trichloroethylene (79-01-6)			X												
30V. Trichlorofluoromethane (75-69-4)				***DELISTED***	***01-8-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichlorophenol (120-83-2)			X												
3A. 2,4-Dimethylphenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitrophenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachlorophenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichlorophenol (88-05-2)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (*a*) Anthracene (56-55-3)			X												
6B. Benzo (*a*) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (*ghi*) Perylene (191-24-2)			X												
9B. Benzo (*k*) Fluoranthene (207-08-9)			X												
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X												
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X												
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X												
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Di-chloro-benzene (541-73-1)			X												

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)			X												
23B. 3,3-Dichlorobenzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131-11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitrotoluene (121-14-2)			X												
28B. 2,6-Dinitrotoluene (606-20-2)			X												
29B. Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachlorobenzene (118-74-1)			X												
34B. Hexachlorobutadiene (87-68-3)			X												
35B. Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)			X												
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitrosodimethylamine (62-75-9)			X												
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA7170024684	002

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

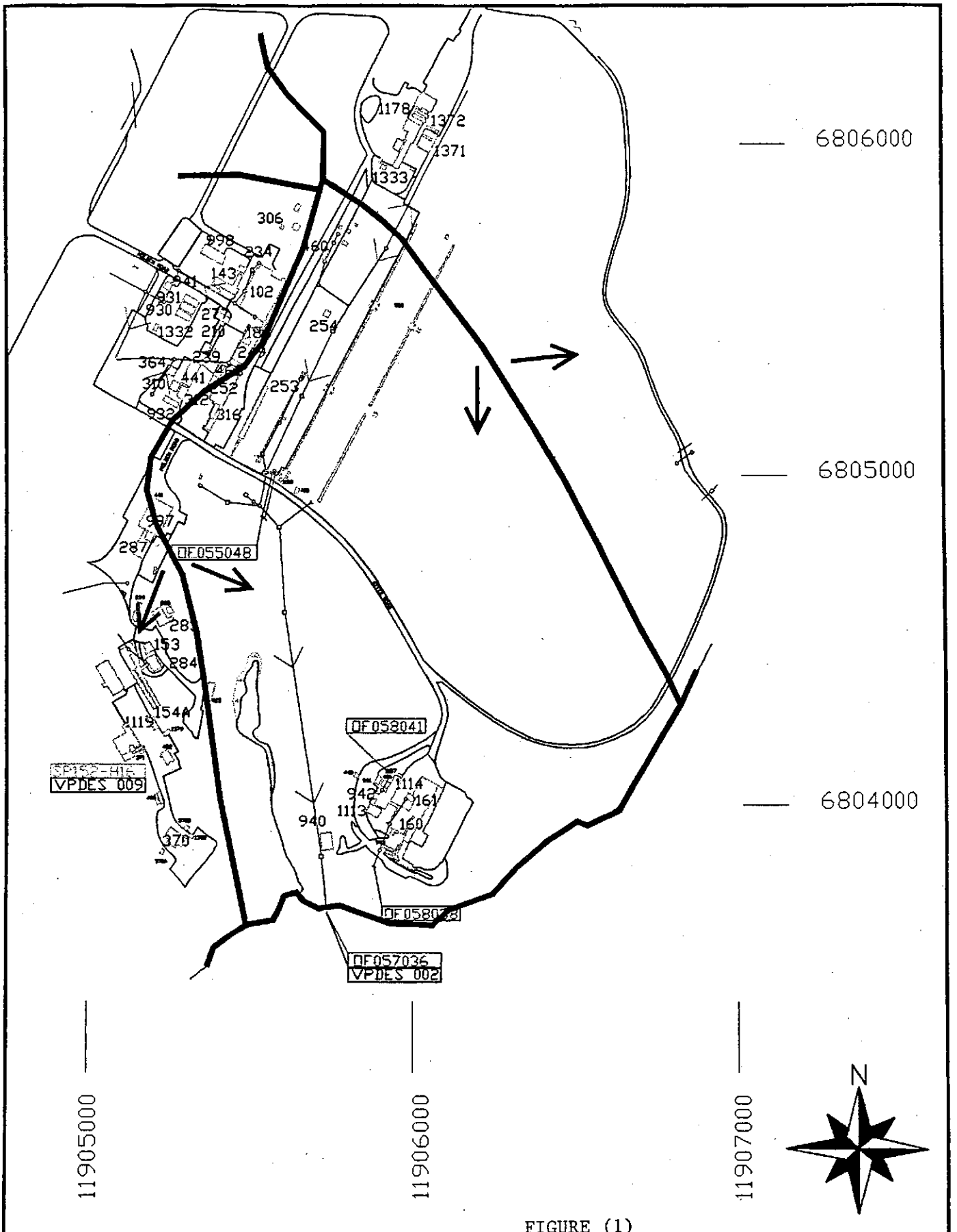


FIGURE (1)

Geophex

NSF , DAHLGREN, VIRGINIA
OPERATIONS AND MAINTENANCE MANUAL
LINE DRAWING OF OUTFALL 002

Outfall 002


Map
Traffic
OUTFALL 002
Edit in Google Map Maker
Report a problem


Map
Traffic
OUTFALL 002
Edit in Google Map Maker
Report a problem

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
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V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO.
003

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	N/A											
b. Chemical Oxygen Demand (*COD*)	N/A											
c. Total Organic Carbon (*TOC*)	N/A											
d. Total Suspended Solids (*TSS*)	N/A											
e. Ammonia (*as N*)	N/A											
f. Flow	VALUE 0.14		VALUE N/A		VALUE 0.053		3	10^6 Gal	N/A	VALUE N/A		N/A
g. Temperature (*winter*)	VALUE 12.3		VALUE N/A		VALUE N/A		1	°C		VALUE N/A		N/A
h. Temperature (*summer*)	VALUE 20.3		VALUE N/A		VALUE N/A		1	°C		VALUE N/A		N/A
i. pH	MINIMUM 6.03	MAXIMUM 6.82	MINIMUM N/A	MAXIMUM N/A			3	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)		X												

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X												
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)		X												
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)		X												
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)		X												
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

CONTINUE ON PAGE V-3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA7170024684	003

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X												
2M. Arsenic, Total (7440-38-2)			X												
3M. Beryllium, Total (7440-41-7)			X												
4M. Cadmium, Total (7440-43-9)			X												
5M. Chromium, Total (7440-47-3)			X												
6M. Copper, Total (7440-50-8)			X												
7M. Lead, Total (7439-92-1)			X												
8M. Mercury, Total (7439-97-6)			X												
9M. Nickel, Total (7440-02-0)			X												
10M. Selenium, Total (7782-49-2)			X												
11M. Silver, Total (7440-22-4)			X												
12M. Thallium, Total (7440-28-0)			X												
13M. Zinc, Total (7440-66-6)			X												
14M. Cyanide, Total (57-12-5)			X												
15M. Phenols, Total			X												
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (*Chloromethyl*) Ether (542-88-1)				***DELISTED***	***02-4-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)				***DELISTED***	***01-8-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane . (79-34-5)			X												
24V. Tetrachloro-ethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloro-ethane (71-55-6)			X												
28V. 1,1,2-Trichloro-ethane (79-00-5)			X												
29V Trichloro-ethylene (79-01-6)			X												
30V. Trichloro-fluoromethane (75-69-4)				***DELISTED***	***01-8-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichloro-phenol (120-83-2)			X												
3A. 2,4-Dimethyl-phenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitro-phenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachloro-phenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichloro-phenol (88-05-2)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (*a*) Anthracene (56-55-3)			X												
6B. Benzo (*a*) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (*ghi*) Perylene (191-24-2)			X												
9B. Benzo (*k*) Fluoranthene (207-08-9)			X												
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X												
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X												
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X												
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Di-chloro-benzene (541-73-1)			X												

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)			X												
23B. 3,3-Dichlorobenzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131 -11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitrotoluene (121-14-2)			X												
28B. 2,6-Dinitrotoluene (606-20-2)			X												
29B. Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachlorobenzene (118-74-1)			X												
34B. Hexachlorobutadiene (87-68-3)			X												
35B. Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)			X												
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitrosodimethylamine (62-75-9)			X												
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA7170024684	003

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

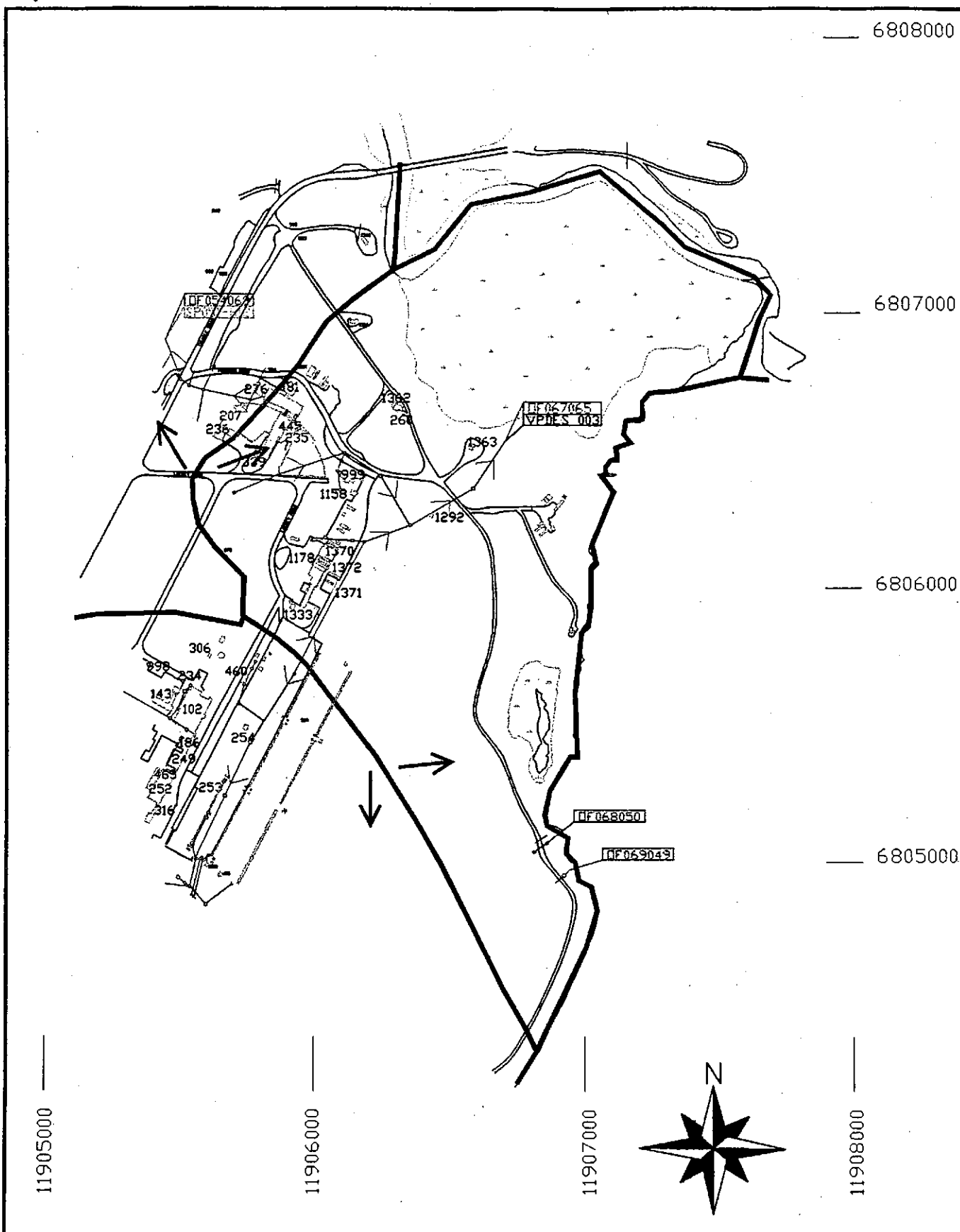


FIGURE (2)

Geophex

NSF , DAHLGREN, VIRGINIA
OPERATIONS AND MAINTENANCE MANUAL
LINE DRAWING OF OUTFALL 003

Outfall 003


Map
Traffic
OUTFALL 003
Edit in Google Map Maker
Report a problem


OUTFALL 003
50 ft
20 m
Imagery ©2012 Commonwealth of Virginia, GeoEye

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA7170024684

V. INTAKE AND EFFLUENT CHARACTERISTICS (*continued from page 3 of Form 2-C*)

OUTFALL NO. 004

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	N/A											
b. Chemical Oxygen Demand (*COD*)	N/A											
c. Total Organic Carbon (*TOC*)	N/A											
d. Total Suspended Solids (*TSS*)	N/A											
e. Ammonia (*as N*)	N/A											
f. Flow	VALUE 0.200		VALUE N/A		VALUE 0.183		3	10^6 Gal	N/A	VALUE N/A		N/A
g. Temperature (*winter*)	VALUE 11.0		VALUE N/A		VALUE N/A		1	°C		VALUE N/A		N/A
h. Temperature (*summer*)	VALUE 20.0		VALUE N/A		VALUE N/A		1	°C		VALUE N/A		N/A
i. pH	MINIMUM 6.02	MAXIMUM 7.21	MINIMUM N/A	MAXIMUM N/A			3	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)		X												

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X												
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)		X												
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)		X												
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)		X												
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA7170024684	004

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X												
2M. Arsenic, Total (7440-38-2)			X												
3M. Beryllium, Total (7440-41-7)			X												
4M. Cadmium, Total (7440-43-9)			X												
5M. Chromium, Total (7440-47-3)			X												
6M. Copper, Total (7440-50-8)			X												
7M. Lead, Total (7439-92-1)			X												
8M. Mercury, Total (7439-97-6)			X												
9M. Nickel, Total (7440-02-0)			X												
10M. Selenium, Total (7782-49-2)			X												
11M. Silver, Total (7440-22-4)			X												
12M. Thallium, Total (7440-28-0)			X												
13M. Zinc, Total (7440-66-6)			X												
14M. Cyanide, Total (57-12-5)			X												
15M. Phenols, Total			X												
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (*Chloromethyl*) Ether (542-88-1)				***DELISTED***	***02-4-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)				***DELISTED***	***01-8-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V. Tetrachloro-ethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloro-ethane (71-55-6)			X												
28V. 1,1,2-Trichloro-ethane (79-00-5)			X												
29V Trichloro-ethylene (79-01-6)			X												
30V. Trichloro-fluoromethane (75-69-4)				***DELISTED***	***01-8-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichloro-phenol (120-83-2)			X												
3A. 2,4-Dimethyl-phenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitro-phenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachloro-phenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichloro-phenol (88-05-2)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (*a*) Anthracene (56-55-3)			X												
6B. Benzo (*a*) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (*ghi*) Perylene (191-24-2)			X												
9B. Benzo (*k*) Fluoranthene (207-08-9)			X												
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X												
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X												
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X												
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Di-chloro-benzene (541-73-1)			X												

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)			X												
23B. 3,3-Dichlorobenzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131-11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitrotoluene (121-14-2)			X												
28B. 2,6-Dinitrotoluene (606-20-2)			X												
29B. Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachlorobenzene (118-74-1)			X												
34B. Hexachlorobutadiene (87-68-3)			X												
35B. Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)			X												
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitrosodimethylamine (62-75-9)			X												
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA7170024684	004

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

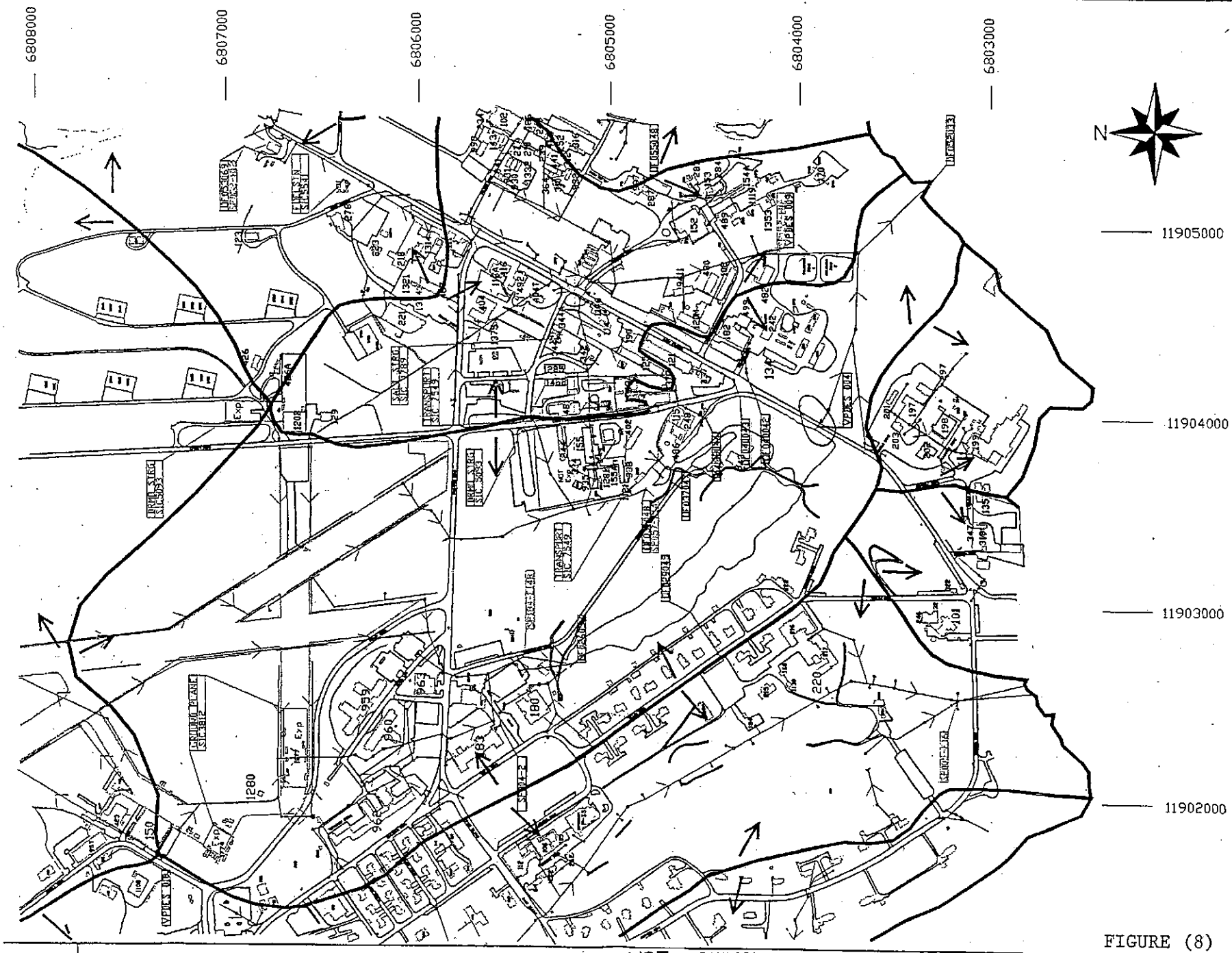
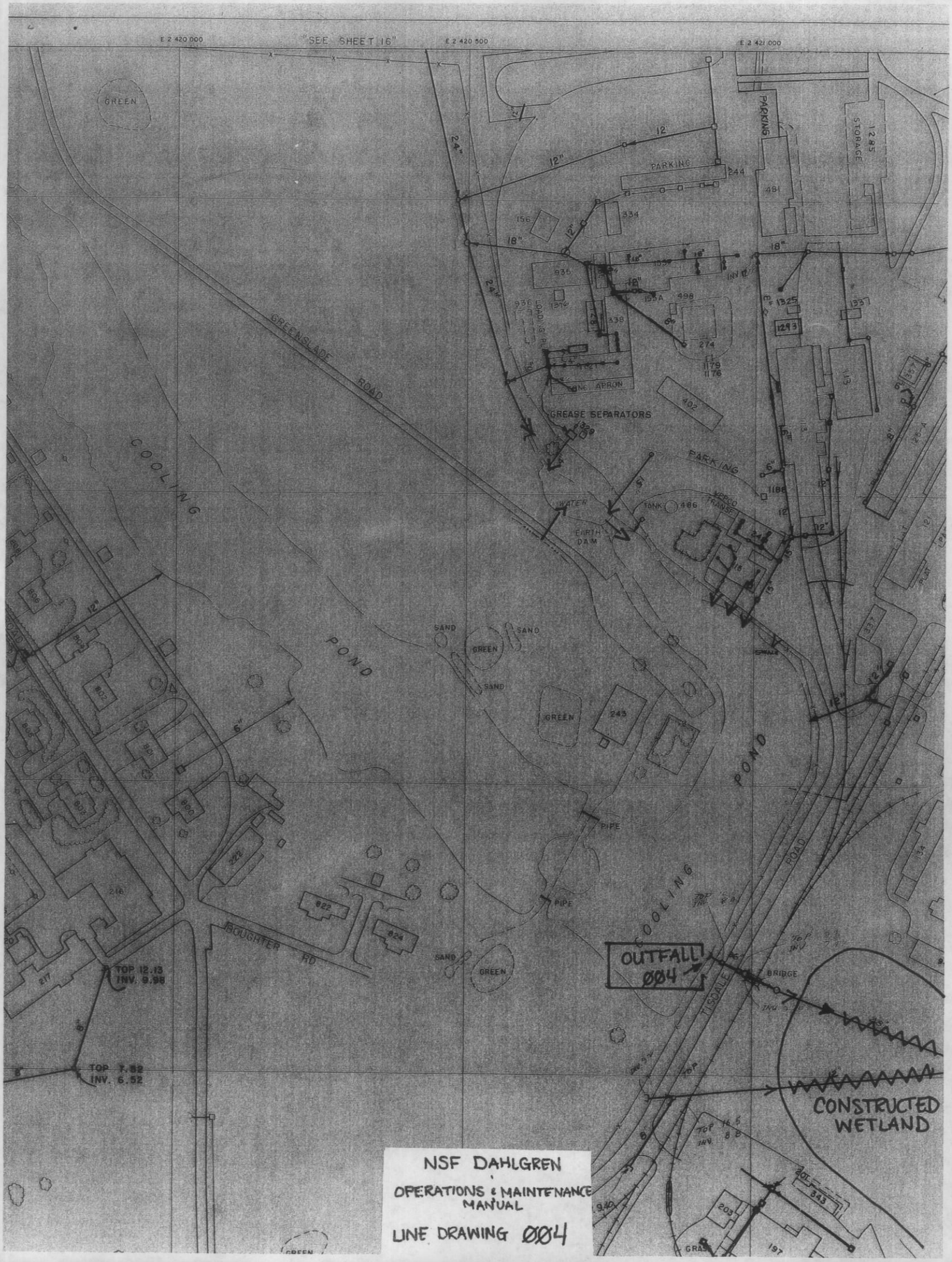


FIGURE (8)

NSF , DAHLGREN, VIRGINIA
OPERATIONS AND MAINTENANCE MANUAL
LINE DRAWING OF OUTFALL 004


E 2 420 000
"SEE SHEET 16"
E 2 420 500
E 2 421 000
GREEN
PARKING
STORAGE
GREENSLADE ROAD
COOLING POND
GREASE SEPARATORS
EARTH DAM
WATER TANK
SAND
GREEN
PIPE
BOUGHTER RD
TISDALE ROAD
BRIDGE
OUTFALL 004
CONSTRUCTED WETLAND
TOP 12.13
INV. 9.98
TOP 7.52
INV. 6.52
NSF DAHLGREN
OPERATIONS & MAINTENANCE MANUAL
LINE DRAWING 004

Outfall 004

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA7170024684

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 007

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	N/A											
b. Chemical Oxygen Demand (*COD*)	N/A											
c. Total Organic Carbon (*TOC*)	N/A											
d. Total Suspended Solids (*TSS*)	N/A											
e. Ammonia (*as N*)	N/A											
f. Flow	VALUE 0.029		VALUE N/A		VALUE N/A		1	10^6 Gal	N/A	VALUE N/A		N/A
g. Temperature (*winter*)	VALUE 9.0		VALUE N/A		VALUE N/A		2	°C		VALUE N/A		N/A
h. Temperature (*summer*)	VALUE 21.0		VALUE N/A		VALUE N/A		2	°C		VALUE N/A		N/A
i. pH	MINIMUM 6.34	MAXIMUM 8.4	MINIMUM N/A	MAXIMUM N/A			5	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)		X												

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE *(if available)*		c. LONG TERM AVRG. VALUE *(if available)*		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X												
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)		X												
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)		X												
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)		X												
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA7170024684	007

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)			X												
2M. Arsenic, Total (7440-38-2)			X												
3M. Beryllium, Total (7440-41-7)			X												
4M. Cadmium, Total (7440-43-9)			X												
5M. Chromium, Total (7440-47-3)			X												
6M. Copper, Total (7440-50-8)			X												
7M. Lead, Total (7439-92-1)			X												
8M. Mercury, Total (7439-97-6)			X												
9M. Nickel, Total (7440-02-0)			X												
10M. Selenium, Total (7782-49-2)			X												
11M. Silver, Total (7440-22-4)			X												
12M. Thallium, Total (7440-28-0)			X												
13M. Zinc, Total (7440-66-6)			X												
14M. Cyanide, Total (57-12-5)			X												
15M. Phenols, Total			X												
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis (*Chloromethyl*) Ether (542-88-1)				***DELISTED***	***02-4-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)				***DELISTED***	***01-8-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V. Tetrachloroethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloroethane (71-55-6)			X												
28V. 1,1,2-Trichloroethane (79-00-5)			X												
29V Trichloroethylene (79-01-6)			X												
30V. Trichlorofluoromethane (75-69-4)				***DELISTED***	***01-8-81***	**ANALYSIS**	**NOT**	**REQUIRED**	**FOR**	**THIS**					
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichlorophenol (120-83-2)			X												
3A. 2,4-Dimethylphenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitrophenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachlorophenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichlorophenol (88-05-2)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo (*a*) Anthracene (56-55-3)			X												
6B. Benzo (*a*) Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo (*ghi*) Perylene (191-24-2)			X												
9B. Benzo (*k*) Fluoranthene (207-08-9)			X												
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)			X												
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)			X												
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)			X												
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)			X												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo (*a,h*) Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Di-chloro-benzene (541-73-1)			X												

CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)			X												
23B. 3,3-Dichlorobenzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131-11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitrotoluene (121-14-2)			X												
28B. 2,6-Dinitrotoluene (606-20-2)			X												
29B. Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachlorobenzene (118-74-1)			X												
34B. Hexachlorobutadiene (87-68-3)			X												
35B. Hexachlorocyclopentadiene (77-47-4)			X												
36B Hexachloroethane (67-72-1)			X												
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)			X												
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitrosodimethylamine (62-75-9)			X												
42B. N-Nitrosodi-N-Propylamine (621-64-7)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4-Tri-chlorobenzene (120-82-1)			X												
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA7170024684	007

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

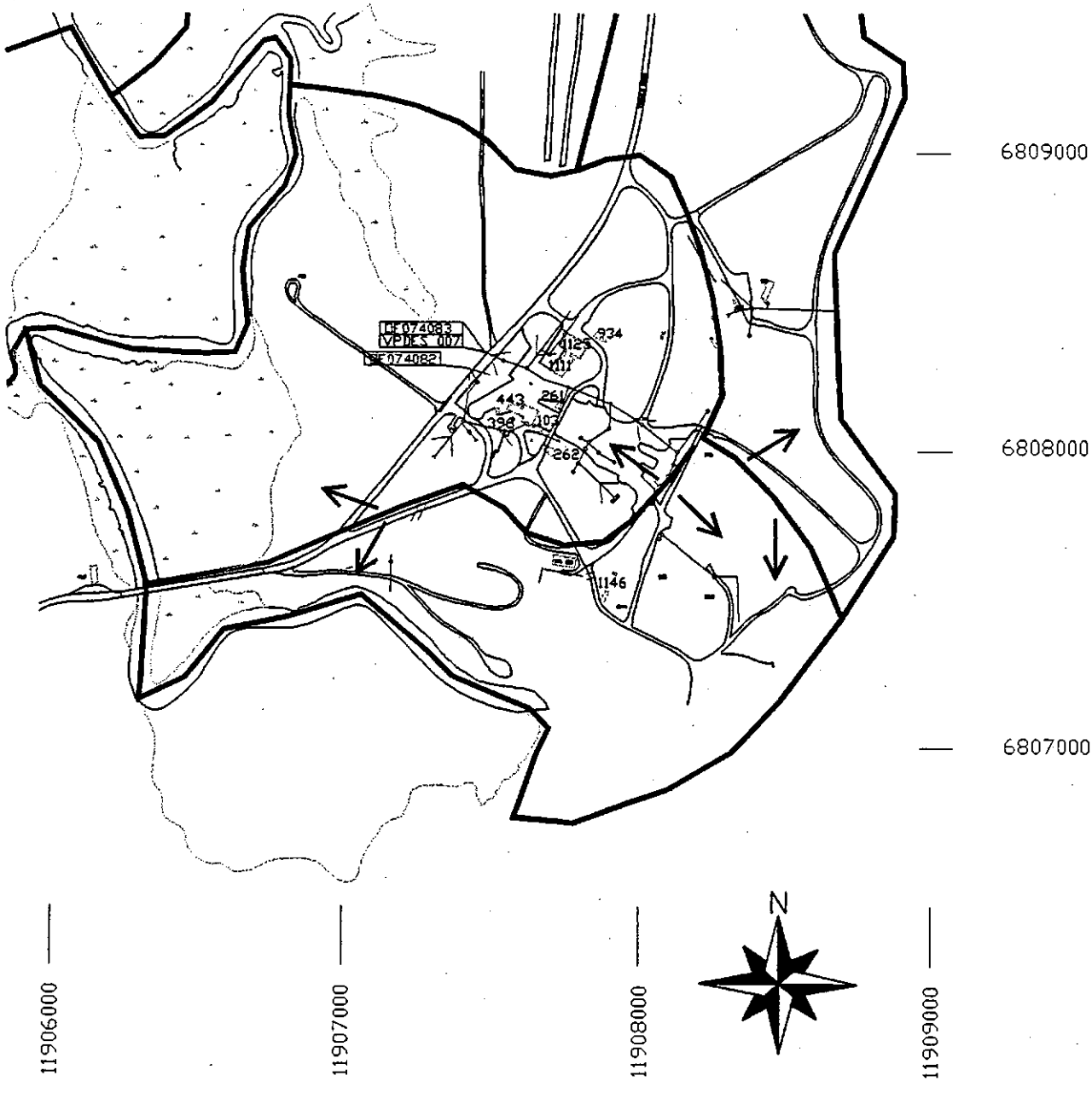


FIGURE (3)

Geophex

NSF . DAHLGREN, VIRGINIA
OPERATIONS AND MAINTENANCE MANUAL
LINE DRAWING OF OUTFALL 007

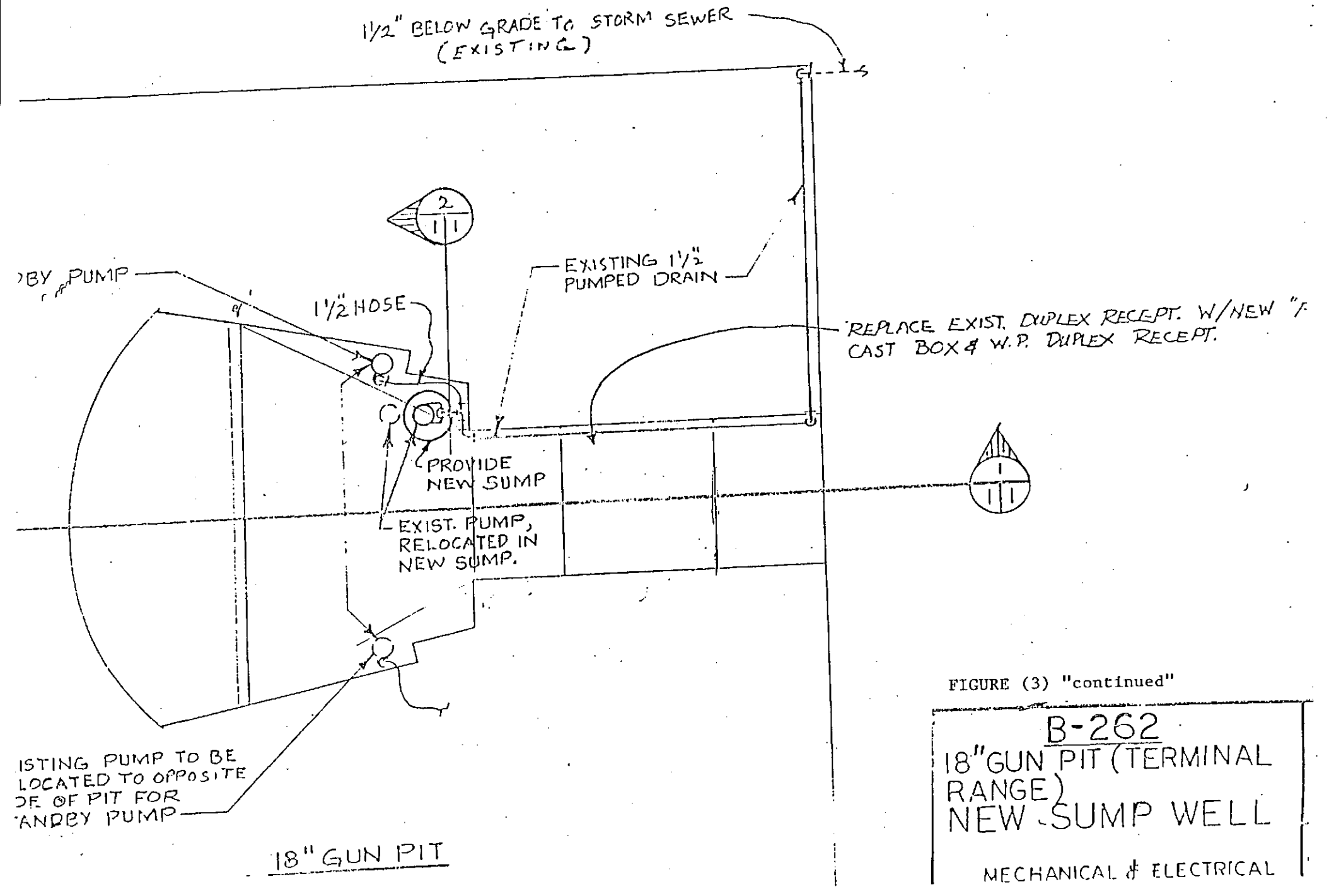
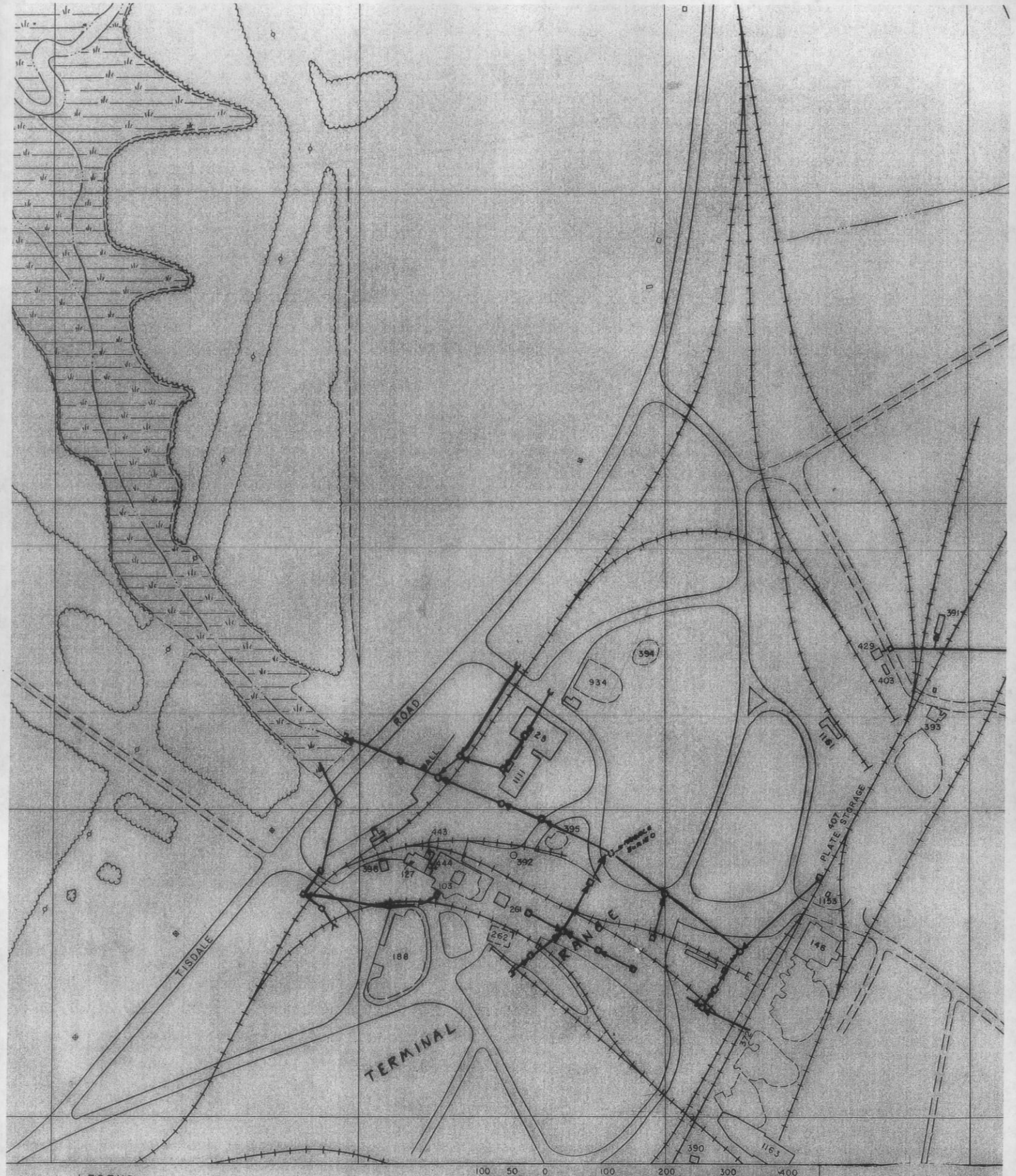


FIGURE (3) "continued"

B-262

18" GUN PIT (TERMINAL RANGE)
NEW SUMP WELL

MECHANICAL & ELECTRICAL



NSF DAHLGREN
OPERATIONS & MAINTENANCE MANUAL
LINE DRAWING OF OUTFALL 007

Outfall 007

ENCLOSURE (4)

EPA Form 2C, II, B.
EPA Form 2F, IV, B.

Permit Number VA0073636
Stormwater/Industrial Individual Permit Outfall Descriptions

Outfall Number	Latitude Longitude (d/m/s)	Average Design Flow (MGD), from Runoff Coefficients	Surface Area (ft^2)	Surface Features
002	38° 19' 18" 77° 01' 34"	0.87 x (Total Rain (ft))	123,055	100% paved
003	38° 19' 46" 77° 01' 21"	1.0 x (Total Rain (ft))	215,871	62% paved 38% unpaved
004	38° 19' 21" 77° 01' 56"	21 x (Total Rain (ft))	6,500,000	32 % paved 62% unpaved 6% water
006	38° 19' 11" 77° 02' 03"	0.23 x (Total Rain (ft))	105,000	23% paved 77% unpaved
007	38° 20' 01" 77° 01' 07"	0.62 x (Total Rain (ft))	87,271	100% paved
009	38° 19' 24" 77° 01' 44"	0.70 x (Total Rain (ft))	153,300	60% paved 40% unpaved
012	38° 18' 09" 77° 01' 56"	0.77 x (Total Rain (ft))	829,000	88% flat lawn 12% unimproved
013	38° 18' 22" 77° 02' 01"	-----	572,000	97% flat lawn 3% unimproved

INDUSTRIAL PROCESS OUTFALLS

* Request these outfalls be considered STORMWATER FROM INDUSTRIAL ACTIVITIES OUTFALLS in future permits.

OUTFALL 002 – MAIN RANGE

- This outfall receives stormwater and groundwater discharge from seven gun mount sumps. Two of the seven gun mounts are actively used. The water is pumped manually or with a sump pump.
- BMPs include regular inspections which are covered under the base SWPP plan.
- Maintenance cleaning will be included as a BMP in the SWPPP to reduce copper concentrations at the site. Sumps have been periodically cleaned as part of maintenance to the sump and range equipment.
- Request the following permit parameters/BMPs:
  - Maintain regular inspections as monthly.
  - Maintain quarterly sampling for TPH and pH.
  - Maintain metals monitoring for copper at a frequency of once per year.
  - Maintain biological toxicity monitoring once every five years.

ENCLOSURE (4)

- Request that a composite sample of all actively used sump water be permitted to be collected and tested directly should range activities prevent access during rain events.

OUTFALL 003 – NORTH MAIN RANGE

- This outfall receives stormwater and groundwater discharge from one active gun mount sump. The water is pumped manually or with a sump pump.
- BMPs include regular inspections and maintenance cleaning.
- Request the following permit parameters:
  - Maintain regular inspections as monthly.
  - Maintain annual sampling for TPH and pH; request that DEQ consider OUTFALL 003 as substantially similar to OUTFALL 002 as described in 40 CFR 122.28 (A).
  - Request that a composite sample of all active sumps sump water be permitted to be collected and tested directly should range activities prevent access during rain events.

OUTFALL 004 – COOLING POND

- This outfall formerly supplied non-contact cooling water to two large generators. The generators were taken out of service and the supply and discharge lines to the generators have were severed and capped prior to the 2008 permit renewal, supporting photographs were sent at that time.
- This outfall receives stormwater discharge from a large part of the developed portion of the base, including the Transportation and other Public Works areas, base housing, base administration, a small runway, labs, and other technical operations. One oil-water separator located in the Transportation area, two sumps located at the Ground Plane test area, and one containment storing non-PCB transformers discharge to the pond. BMPs include regular inspection of sumps, oil-water separator maintenance, and regular housekeeping.
- The pond discharges to a constructed wetland prior to discharging into Upper Machodoc Creek.
- Request the following permit parameters/BMPs:
  - Request quarterly dry weather monitoring for TPH and pH or allow for water to be sampled within 48 hours of a rain event.

OUTFALL 007 – TERMINAL RANGE

- This outfall receives stormwater and groundwater from one active gun mount sump, hereafter referred to as #1 sump. Three additional sumps are adjacent to #1 sump. As recommended at the site visit in April 2001 by VDEQ, the additional sumps were added to the SWPPP. The additional sumps are considered substantially similar to #1 sump as described in 40 CFR 122.28 (A).
- The water is pumped manually or with a sump pump.
- BMPs include regular inspections and maintenance cleaning. If an oil sheen is observed, samples will be analyzed before the sump is pumped out. Cleaning of the active gun mount sump has been completed.
- Request the following permit parameters
  - Reduce regular inspections to quarterly.
  - Maintain annual sampling for TPH and pH at #1 sump only, as additional sumps are substantially similar. And request that sump water be permitted to be collected and tested directly should range activities prevent access during rain events.

STORMWATER FROM INDUSTRIAL ACTIVITIES OUTFALLS

OUTFALL 006 – YARDCRAFT

- The outfall receives stormwater discharge from a marina. The marina supports the base river range operations. Very minor boat maintenance is performed at Yardcraft. Boats are stored in a grassy area behind the marina.
- Request the following permit parameters:
  - Maintain sampling for TPH, pH, and TSS, within 30 minutes of a rain event.
  - Maintain metals monitoring for copper at a frequency of once per year.

OUTFALL 009 – SALT DOME AND METAL STORAGE

- The outfall receives stormwater run-off from an exposed metal storage area and a covered Salt Dome facility. The exposed metal storage area includes metal from the machine shop, metal from electronic equipment, and gun mounts.
- Request the following permit parameters:
  - Maintain BMPs including quarterly inspections after a rain event and good housekeeping practices.

OUTFALLS 012 & 013– EEA

- These two outfalls receive stormwater run-off from the Churchill Range that includes the Open Burn/Open Detonation (OB/OD) Units and the area used for research, development, testing, and evaluation (RDT&E). The OB/OD Units operate under a Resource Conservation and Recovery Act Subpart X permit for the treatment of explosive hazardous waste.
- Request the following permit parameters:
  - Request BMPs including quarterly visual inspection within 48 hours of a rain event, when range activity does not permit visuals being taken during the rain event.
  - Add BMPs as necessary based on quarterly visual monitoring.

Outfall 002


Map
Traffic
OUTFALL 002
Edit in Google Map Maker
Report a problem


Map
Traffic
OUTFALL 002
Edit in Google Map Maker
Report a problem

Outfall 003


Map
Traffic
OUTFALL 003
Edit in Google Map Maker
Report a problem

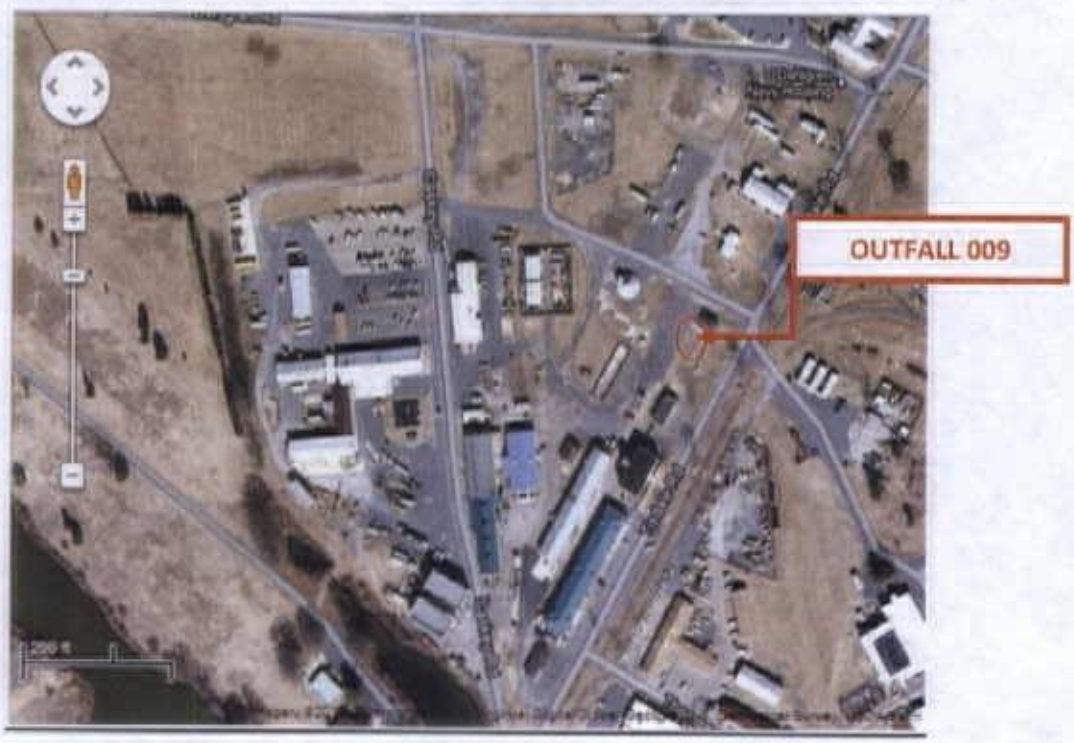

OUTFALL 003
50 ft
20 m

Outfall 004

Outfall 006

Outfall 007

Outfall 009



Outfall 012 and 013

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
VA7170024684

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM 2F NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
002	38	19	15	77	01	30	UPPER MACHODOC CREEK
003	38	19	45	77	01	15	GAMBO CREEK
004	38	19	15	77	02	00	UPPER MACHODOC CREEK
006	38	19	15	77	02	00	UPPER MACHODOC CREEK
007	38	20	00	77	01	00	GAMBO CREEK
009	38	19	30	77	01	45	UPPER MACHODOC CREEK
012	38	18	15	77	02	00	BLACK MARSH / POTOMAC RIVER
013	38	18	15	77	02	00	UPPER MACHODOC CREEK

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
N/A					

B: You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

ENCLOSURE (5)

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of imperious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
002	123,055 sq ft	123,055 sq ft	009	91,980 sq ft	153,300 sq ft
003	133,840 sq ft	215,871 sq ft	012	<1,000 sq ft	829,000 sq ft
004	2,080,000 sq ft	6,500,00 sq ft	013	<1,000 sq ft	572,000 sq ft
006	24,000 sq ft	105,000 sq ft			
007	87,271 sq ft	87,271 sq ft			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

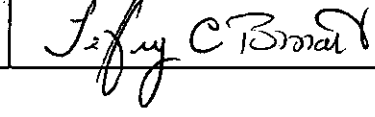
Refer to ENCLOSURE (4) for Additional Information
*002 - Drainage area includes paved surfaces and seven below-grade gun mount sumps which discharge to the Upper Machodoc Creek.
*003 - Drainage area includes paved surfaces and below-grade gun mount sumps which discharge to the Gambo Creek.
*004 - Drainage area includes Transportation and other PW areas, housing,
*006 - At this yardcraft area boat upkeep associated waste oil and bilge water is collected into 55-gallon drums and recycled. The drums are covered and stored on containment pallets in a containment berm.
*007 - Drainage area includes paved surfaces and below-grade gun mount sumps which discharge to the Gambo Creek.
*009 - Drainage area includes runnoff from an exposed metal storage area, outdoor vehicle and equipment storage, and a covered salt dome facility. The exposed metal storage area includes
*012 - This area includes the southern portion of the Open Burn/Open Detonation (OB/OD) explosives test area.
*013 - This area includes the northern portion of the OB/OD explosives test area.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
002	Monthly inspections of gunmount area	4-A
003	Monthly inspections of gunmount area	4-A
004	Regular inspection of sumps, oil-water separator maintenance, and regular housekeeping	4-A, 1-H
006	Cover drums and store on contaiment pallets., weekly inspection	4-A
007	Monthly inspections of gunmount area	4-A
009	Sand and salt are covered, revegitated area; no controls for metal storage	4-A
012 / 013	Regular inspection (009, 012, 013 - quarterly inspections)	4-A

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
J.C. BOSSART, by direction of CO		03 December 2012

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

AN ILLICIT DISCHARGE SURVEY WAS CONDUCTED OCTOBER THROUGH DECEMBER 1996 TO DETERMINE IF ANY NONSTORMWATER DISCHARGES OCCURED AT NSF DAHLGREN. NONSTORMWATER DISCHARGES IDENTIFIED DURING THE INITIAL SURVEY HAVE BEEN CORRECTED. AS AN ONGOING EFFORT TO PREVENT AND IDENTIFY NONSTORMWATER DISCHARGES , ANNUAL FACILITY INSPECTIONS ARE PERFORMED TO EVALUATE NEW AND EXISTING AREAS AS DESCRIBED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). ADDITIONALLY AN ILLICIT DISCHARGE SURVEY FOR NSF DAHLGREN HAS BEEN AWARDED AND WILL BE CONDUCTED DURING 2013. IF ANY NONSTORMWATER DISCHARGES ARE DISCOVERED, VDEQ WILL BE NOTIFIED AND CORRECTIVE ACTION WILL BE TAKEN.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

NO SIGNIFICANT SPILLS/LEAKS IN THE LAST THREE YEARS (2009-2012).

EPA ID Number *(copy from Item 1 of Form 1)*
VA7170024684

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes *(list all such pollutants below)* ☑ No *(go to Section IX)*

N/A

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☑ Yes *(list all such pollutants below)* ☐ No *(go to Section IX)*

16 NOVEMBER 2011 BIOLOGICAL ACUTE TOXICITY TESTING WAS PREFORMED AT OUTFALLS 002 AND 006 ACCORDING TO VPDES PERMIT NO. VA0073636 REQUIREMENTS. 48-HOUR LC50 WAS > 100%.

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☑ Yes *(list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)* ☐ No *(go to Section X)*

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Coastal Bioanalysts, Inc.	6400 Enterprise Court Gloucester, VA 23061	(804) 694-8285	48-Hour Acute Biological Toxicity
Tidewater Inc.	7161 Columbia Gateway Drive - Suite C Columbia, MD 21046	(410) 997 4458 x 157	TPH, TSS, Cu, and most Permit required ATTACHMENT A Sampling
Environmental Systems Service, LID	218 North Main Street Culpepper, VA 22701	(540) 825 6660	Tributyltin for Permit required ATTACHMENT A Sampling

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title *(Type Or Print)*	B. Area Code and Phone No.
J.C. BOSSART, By direction of the Commanding Officer	(301) 744-4705
C. Signature	D. Date Signed
	03 December 2012

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Biological Oxygen Demand (BOD5)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Chemical Oxygen Demand (COD)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Suspended Solids (TSS)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO SIGNIFICANT SOURCES
Total Nitrogen	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Phosphorus	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
pH	Minimum 6.30	Maximum 6.90	Minimum N/A	Maximum N/A	3	ACID RAIN (LOW)/CONCRETE LEACH(HIGH)

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TPH	<QL (QL=5mg/L)	N/A-SW monitoring	<QL	N/A-SW monitoring	3	General mechanical/vehicle activity
Cu, dissolved	8.1 ug/L	N/A-SW monitoring	N/A	N/A-SW monitoring	1	Exposed metal sto and range activity

Continue on Reverse

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
03/24/12	~60 minutes	0.19 inches	>72 hours	Not measured, flow rate is a product of rainfall intensity.	0.014 MG (unit, million gallons)

7. Provide a description of the method of flow measurement or estimate.

Flow measurement is an estimate from landcover data (runnoff coefficient).

Average runnoff coefficient = 0.95

Flow estimate calculation = (0.87) (precipitation event in feet, ft) = Flow in MG (million gallons)

EPA ID Number (*copy from Item 1 of Form 1*)
VA7170024684 (OUTFALL 003)

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Biological Oxygen Demand (BOD5)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Chemical Oxygen Demand (COD)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Suspended Solids (TSS)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO SIGNIFICANT SOURCES
Total Nitrogen	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Phosphorus	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
pH	Minimum 6.03	Maximum 6.82	Minimum N/A	Maximum N/A	3	ACID RAIN (LOW)/CONCRETE LEACH(HIGH)

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TPH	12.0 mg/L	N/A-SW monitoring	<QL	N/A-SW monitoring	3	General mechanical/vehicle activity
			*QL <=5mg/L			

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.						
Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
06/18/12	~60 minutes	0.12 inches	>72 hours	Not measured, flow rate is a product of rainfall intensity.	0.0083 MG (unit, million gallons)

7. Provide a description of the method of flow measurement or estimate.

Flow measurement is an estimate from landcover data (runnoff coefficient).

Average runnoff coefficient = 0.95 for 62% paved, and 0.10 for 38% unpaved

Flow estimate calculation = (1.0) (precipitation event in feet, ft) = Flow in MG (million gallons)

EPA ID Number (*copy from Item 1 of Form 1*)
VA7170024684 (OUTFALL 004)

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Biological Oxygen Demand (BOD5)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Chemical Oxygen Demand (COD)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Suspended Solids (TSS)	WAIVER REQUEST	N/A	N/A	N/A	N/A	SUSPENDED ALGAE & SILT & MICO-ORGAN
Total Nitrogen	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Phosphorus	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
pH	Minimum 6.02	Maximum 7.21	Minimum N/A	Maximum N/A	3	ACID RAIN (LOW)/CONCRETE LEACH(HIGH)

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TPH	<QL	N/A-SW monitoring	<QL	N/A-SW monitoring	3	General mechanical/vehicle activity
			*QL <=5mg/L			

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
04/26/12	~60 minutes	0.10 inches	>72 hours	Not measured, flow rate is a product of rainfall intensity.	0.175 MG (unit, million gallons)

7. Provide a description of the method of flow measurement or estimate.

Flow measurement is an estimate from landcover data (runnoff coefficient).

Average runnoff coefficient = 0.95 for 32% paved, 0.10 for 62% unpaved, and 1.0 for 6% water

Flow estimate calculation = (21) (precipitation event in feet, ft) = Flow in MG (million gallons)

EPA ID Number (*copy from Item 1 of Form 1*)
VA7170024684 (OUTFALL 006)

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Biological Oxygen Demand (BOD5)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Chemical Oxygen Demand (COD)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Suspended Solids (TSS)	12 mg/L	N/A-SW grab only	7.67 mg/L	N/A	3	NO SIGNIFICANT SOURCES
Total Nitrogen	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Phosphorus	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
pH	Minimum 6.15	Maximum 7.56	Minimum N/A	Maximum N/A	3	ACID RAIN (LOW)/CONCRETE LEACH(HIGH)

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TPH	<QL (QL=5mg/L)	N/A-SW monitoring	<QL	N/A-SW monitoring	3	General mechanical/vehicle activity
Cu, dissolved	9.7 ug/L	N/A-SW monitoring	N/A	N/A-SW monitoring	1	Exposed metal sto and range activity

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
08/25/11	-60 minutes	0.18 inches	>72 hours	Not measured, flow rate is a product of rainfall intensity.	0.00345 MG (unit, million gallons)

7. Provide a description of the method of flow measurement or estimate.

Flow measurement is an estimate from landcover data (runnoff coefficient).

Average runnoff coefficient = 0.95 for 23% paved, and 0.10 for 77% unpaved

Flow estimate calculation = (0.23) (precipitation event in feet, ft) = Flow in MG (million gallons)

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Biological Oxygen Demand (BOD5)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Chemical Oxygen Demand (COD)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Suspended Solids (TSS)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO SIGNIFICANT SOURCES
Total Nitrogen	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Phosphorus	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
pH	Minimum 7.22	Maximum 8.40	Minimum N/A	Maximum N/A	3	ACID RAIN (LOW)/CONCRETE LEACH(HIGH)

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TPH	<QL (QL=5mg/L)	N/A-SW monitoring	<QL	N/A-SW monitoring	3	General mechanical/vehicle activity

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
11/22/11	~180 minutes	0.56 inches	>72 hours	Not measured, flow rate is a product of rainfall intensity.	0.029 MG (unit, million gallons)

7. Provide a description of the method of flow measurement or estimate.

Flow measurement is an estimate from landcover data (runnoff coefficient).

Average runnoff coefficient = 0.95 for 100% paved

Flow estimate calculation = (0.62) (precipitation event in feet, ft) = Flow in MG (million gallons)

EPA ID Number (*copy from Item 1 of Form 1*)
VA7170024684 (OUTFALL 009)

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Biological Oxygen Demand (BOD5)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Chemical Oxygen Demand (COD)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Suspended Solids (TSS)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO SIGNIFICANT SOURCES
Total Nitrogen	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
Total Phosphorus	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO EXPECTED / SIGNIFICANT SOURCES
pH	Minimum 7.01	Maximum 7.01	Minimum N/A	Maximum N/A	1	ACID RAIN (LOW)/CONCRETE LEACH(HIGH)

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
APPENDIX A					2/5 YR	APPENDIX A monitoring, permit requir
Copper 7440508	0.0076 mg/L	N/A-SW grab only	N/A	N/A	1	Metal Storage
Lead, 749-92-1	0.00095 mg/L	N/A-SW grab only	N/A	N/A	1	Metal Storage
Nickel, 7440020	0.0016 mg/L	N/A-SW grab only	N/A	N/A	1	Metal Storage
Zinc, 7440-66-6	0.029 mg/L	N/A-SW grab only	N/A	N/A	1	Metal Storage
Ammonia NH3-N	0.060 mg/L	N/A-SW grab only	N/A	N/A	1	Wildlife, groundhog burrow in area
Cl TR 7782-50-5	0.07 mg/L	N/A-SW grab only	N/A	N/A	1	Under Investigation
E.coli enteroco	>201 col/100	N/A-SW grab only	N/A	N/A	1	Wildlife, groundhog burrow in area

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
11/22/11	~180 minutes	1.69 inches	>72 hours	Not measured, flow rate is a product of rainfall intensity.	0.099 MG (unit, million gallons)

7. Provide a description of the method of flow measurement or estimate.

Flow measurement is an estimate from landcover data (runnoff coefficient).

Average runnoff coefficient = 0.95 for 60% paved, 0.10 for 40% unpaved

Flow estimate calculation = (0.70) (precipitation event in feet, ft) = Flow in MG (million gallons)

VII. Discharge information *(Continued from page 3 of Form 2F)*

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO DISCHARGE / SIGNIFICANT SOURCES
Biological Oxygen Demand (BOD5)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO DISCHARGE / SIGNIFICANT SOURCES
Chemical Oxygen Demand (COD)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO DISCHARGE / SIGNIFICANT SOURCES
Total Suspended Solids (TSS)	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO DISCHARGE / SIGNIFICANT SOURCES
Total Nitrogen	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO DISCHARGE / SIGNIFICANT SOURCES
Total Phosphorus	WAIVER REQUEST	N/A	N/A	N/A	N/A	NO DISCHARGE / SIGNIFICANT SOURCES
pH	Minimum N/A	Maximum N/A	Minimum N/A	Maximum N/A	N/A	NO DISCHARGE / SIGNIFICANT SOURCES

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						N/A NO DISCHARGE

Continue on Reverse

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
N/A						

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*
N/A NO DISCHARGE NO MAXIMUM VALUES					

7. Provide a description of the method of flow measurement or estimate.

OUTFALL 012
Flow measurement is an estimate from landcover data (runnoff coefficient).

Average runnoff coefficient = 0.10 for 88% flat lawn, 0.30 for 12% unimproved

Flow estimate calculation = (0.77) (precipitation event in feet, ft) = Flow in MG (million gallons)

OUTFALL 013, No flow estimate / no discharge

DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY SOUTH POTOMAC
6509 SAMPSON ROAD, SUITE 217
DAHLGREN, VIRGINIA 22448-5108

IN REPLY REFER TO
5090
Ser PRSD41AS/007
January 10, 2012

Northern Regional Office
Department of Environmental Quality
13901 Crown Court
Woodbridge, Virginia 22193

RE: Virginia Pollutant Discharge Elimination System Permit (VPDES) #VA0073636

Dear Gentlemen:

Enclosed is Naval Support Facility, Dahlgren's VPDES Permit #VA0072626 Attachment A, analytical results at Outfall 009, for the third year of the permit term.

The samples for Outfall 009 were taken on September 23, December 6, and December 21, 2011 within thirty minutes of the precipitation reaching 0.10 inches. Each rain event lasted over a period of several hours. Below is a summary of each precipitation event:

Date	Total Precipitation (inches)	Total Monthly Rainfall (inches)
23 September	1.69	5.12
6 December	0.47	4.90
21 December	0.12	4.90

VPDES Permit Attachment A (enclosure (1)) contains analytical results. Analytical Laboratory reports are also provided as (enclosure (2)).

As indicated through telephone and email correspondence with the Department of Environmental Quality (enclosure (3)), Chlorine Produced Oxidant is to be removed from list of parameters required to be analyzed under the VPDES permit. Email correspondence also indicates total residual chlorine to be analyzed via field measurements using NSF, Dahlgren's potable water chlorine meter, a Hach Pocket Cholorimeter II. The total residual chlorine reported on December 21 was 0.07 mg/L.

5090
Ser PRSD41AS/007

The analytical methodology implemented for Ammonia differs from that listed in permit Attachment A (EPA Method 350.1). Notwithstanding, enclosure (4) provides documentation indicating the method used by the analytical laboratory, *ASTM Method D6919-03*, is an approved method in 40 CFR Part 136, and the laboratory has obtained NELAC certification for this method.

Please direct all correspondence to:

ATTN: Director, Environmental Division
Department of the Navy
NAVFAC Washington, PWD South Potomac
18329 Thompson Road, Suite 226
Dahlgren, Virginia 22448-5110

For further information, please contact Ms. Brenna White, Code PRSD41BW, at (540) 653-2341.

Sincerely,

WALTER A. LEGG, P.E.
By direction

Enclosures:
1. VPDES Permit Attachment A
2. Analytical Laboratory Reports
3. Email Correspondence
4. Documentation for *ASTM Method D6919-03*

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
METALS						
7440-36-0	Antimony, dissolved	(3)	(3)	<0.0020 mg/L	G or C	2/5 YR
7440-38-2	Arsenic, dissolved	(3)	(3)	0.0018 mg/L	G or C	2/5 YR
7440-43-9	Cadmium, dissolved	(3)	(3)	<0.0010 mg/L	G or C	2/5 YR
16065-83-1	Chromium III, dissolved [8]	(3)	(3)	<0.010 mg/L	G or C	2/5 YR
18540-29-9	Chromium VI, dissolved [8]	(3)	(3)	<0.010 mg/L	G or C	2/5 YR
7440-50-8	Copper, dissolved	(3)	(3)	0.0076 mg/L	G or C	2/5 YR
7439-92-1	Lead, dissolved	(3)	(3)	0.00095 mg/L	G or C	2/5 YR
7439-97-6	Mercury, dissolved	(3)	(3)	<0.00020 mg/L	G or C	2/5 YR
7440-02-0	Nickel, dissolved	(3)	(3)	0.0016 mg/L	G or C	2/5 YR
7782-49-2	Selenium, dissolved	(3)	(3)	<0.0020 mg/L	G or C	2/5 YR
7440-22-4	Silver, dissolved	(3)	(3)	<0.0020 mg/L	G or C	2/5 YR
7440-28-0	Thallium, dissolved	(4)	(5)	<0.0010 mg/L	G or C	2/5 YR
7440-66-6	Zinc, dissolved	(3)	(3)	0.029 mg/L	G or C	2/5 YR
PESTICIDES/PCB'S						
309-00-2	Aldrin	608	0.05	<0.024 ug/L	G or SC	2/5 YR
57-74-9	Chlordane	608	0.2	<0.48 ug/L	G or SC	2/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	622	(5)	<0.95 ug/L	G or SC	2/5 YR
72-54-8	DDD	608	0.1	<0.024 ug/L	G or SC	2/5 YR
72-55-9	DDE	608	0.1	<0.024 ug/L	G or SC	2/5 YR
50-29-3	DDT	608	0.1	<0.024 ug/L	G or SC	2/5 YR
8065-48-3	Demeton	(4)	(5)	<1.9 ug/L	G or SC	2/5 YR
60-57-1	Dieldrin	608	0.1	<0.024 ug/L	G or SC	2/5 YR
959-98-8	Alpha-Endosulfan	608	0.1	<0.024 ug/L	G or SC	2/5 YR
33213-65-9	Beta-Endosulfan	608	0.1	<0.024 ug/L	G or SC	2/5 YR
1031-07-8	Endosulfan Sulfate	608	0.1	<0.024 ug/L	G or SC	2/5 YR
72-20-8	Endrin	608	0.1	<0.024 ug/L	G or SC	2/5 YR

ENCLOSURE (1)

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
7421-93-4	Endrin Aldehyde	(4)	(5)	<0.024 ug/L	G or SC	2/5 YR
86-50-0	Guthion	622	(5)	<0.95 ug/L	G or SC	2/5 YR
76-44-8	Heptachlor	608	0.05	<0.024 ug/L	G or SC	2/5 YR
1024-57-3	Heptachlor Epoxide	(4)	(5)	<0.024 ug/L	G or SC	2/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	(5)	<0.024 ug/L	G or SC	2/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	(5)	<0.024 ug/L	G or SC	2/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	(5)	<0.024 ug/L	G or SC	2/5 YR
143-50-0	Kepone	(9)	(5)	<15.2 ug/L	G or SC	2/5 YR
121-75-5	Malathion	(4)	(5)	<1.9 ug/L	G or SC	2/5 YR
72-43-5	Methoxychlor	(4)	(5)	<0.024 ug/L	G or SC	2/5 YR
2385-85-5	Mirex	(4)	(5)	<0.024 ug/L	G or SC	2/5 YR
56-38-2	Parathion	(4)	(5)	<0.95 ug/L	G or SC	2/5 YR
11096-82-5	PCB 1260	608	1.0	<0.48 ug/L	G or SC	2/5 YR
11097-69-1	PCB 1254	608	1.0	<0.48 ug/L	G or SC	2/5 YR
12672-29-6	PCB 1248	608	1.0	<0.48 ug/L	G or SC	2/5 YR
53469-21-9	PCB 1242	608	1.0	<0.48 ug/L	G or SC	2/5 YR
11141-16-5	PCB 1232	608	1.0	<0.48 ug/L	G or SC	2/5 YR
11104-28-2	PCB 1221	608	1.0	<0.48 ug/L	G or SC	2/5 YR
12674-11-2	PCB 1016	608	1.0	<0.48 ug/L	G or SC	2/5 YR
1336-36-3	PCB Total	608	7.0	<3.36 ug/L	G or SC	2/5 YR
8001-35-2	Toxaphene	608	5.0	<0.96 ug/L	G or SC	2/5 YR
	BASE NEUTRAL EXTRACTABLES					
83-32-9	Acenaphthene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
120-12-7	Anthracene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
92-87-5	Benzidine	(4)	(5)	<28.4 ug/L	G or SC	2/5 YR
56-55-3	Benzo (a) anthracene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
207-08-9	Benzo (k) fluoranthene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
50-32-8	Benzo (a) pyrene	625	10.0	<1.4 ug/L	G or SC	2/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMP FREQUE.
111-44-4	Bis 2-Chloroethyl Ether	(4)	(5)	<2.8 ug/L	G or SC	2/5 YR
39638-32-9	Bis 2-Chloroisopropyl Ether	(4)	(5)	<2.8 ug/L	G or SC	2/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0	<2.8 ug/L	G or SC	2/5 YR
91-58-7	2-Chloronaphthalene	(4)	(5)	<2.8 ug/L	G or SC	2/5 YR
218-01-9	Chrysene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0	<1.9 ug/L	G or SC	2/5 YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0	<2.8 ug/L	G or SC	2/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0	<1.0 ug/L	G or SC	2/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0	<1.0 ug/L	G or SC	2/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0	<1.0 ug/L	G or SC	2/5 YR
91-94-1	3,3-Dichlorobenzidine	(4)	(5)	<15.2 ug/L	G or SC	2/5 YR
84-66-2	Diethyl phthalate	625	10.0	<7.6 ug/L	G or SC	2/5 YR
117-81-7	Di-2-Ethylhexyl Phthalate	625	10.0	1.6 ug/L	G or SC	2/5 YR
131-11-3	Dimethyl phthalate	(4)	(5)	<7.6 ug/L	G or SC	2/5 YR
121-14-2	2,4-Dinitrotoluene	625	10.0	<2.8 ug/L	G or SC	2/5 YR
122-66-7	1,2-Diphenylhydrazine	(4)	(5)	<2.8 ug/L	G or SC	2/5 YR
206-44-0	Fluoranthene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
86-73-7	Fluorene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
118-74-1	Hexachlorobenzene	(4)	(5)	<2.8 ug/L	G or SC	2/5 YR
87-68-3	Hexachlorobutadiene	(4)	(5)	<2.8 ug/L	G or SC	2/5 YR
77-47-4	Hexachlorocyclopentadiene	(4)	(5)	<7.6 ug/L	G or SC	2/5 YR
67-72-1	Hexachloroethane	(4)	(5)	<2.8 ug/L	G or SC	2/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0	<1.4 ug/L	G or SC	2/5 YR
78-59-1	Isophorone	625	10.0	<2.8 ug/L	G or SC	2/5 YR
98-95-3	Nitrobenzene	625	10.0	<2.8 ug/L	G or SC	2/5 YR
62-75-9	N-Nitrosodimethylamine	(4)	(5)	<2.8 ug/L	G or SC	2/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	(5)	<2.8 ug/L	G or SC	2/5 YR
86-30-6	N-Nitrosodiphenylamine	(4)	(5)	<2.8 ug/L	G or SC	2/5 YR
129-00-0	Pyrene	625	10.0	<1.4 ug/L	G or SC	2/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0	<2.8 ug/L	G or SC	2/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
VOLATILES						
107-02-8	Acrolein	(4)	(5)	<30.0 ug/L	G	2/5 YR
107-13-1	Acrylonitrile	(4)	(5)	< 5.0 ug/L	G	2/5 YR
71-43-2	Benzene	624	10.0	<1.0 ug/L	G	2/5 YR
75-25-2	Bromoform	624	10.0	<2.0 ug/L	G	2/5 YR
56-23-5	Carbon Tetrachloride	624	10.0	<1.0 ug/L	G	2/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0	<1.0 ug/L	G	2/5 YR
124-48-1	Chlorodibromomethane	624	10.0	<1.0 ug/L	G	2/5 YR
67-66-3	Chloroform	624	10.0	<1.0 ug/L	G	2/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0	0.79 ug/L	G	2/5 YR
75-27-4	Dichlorobromomethane	624	10.0	<1.0 ug/L	G	2/5 YR
107-06-2	1,2-Dichloroethane	624	10.0	<1.0 ug/L	G	2/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0	<1.0 ug/L	G	2/5 YR
156-60-5	1,2-trans-dichloroethylene	(4)	(5)	<1.0 ug/L	G	2/5 YR
78-87-5	1,2-Dichloropropane	(4)	(5)	<1.0 ug/L	G	2/5 YR
542-75-6	1,3-Dichloropropene	(4)	(5)	<1.0 ug/L	G	2/5 YR
100-41-4	Ethylbenzene	624	10.0	<1.0 ug/L	G	2/5 YR
74-83-9	Methyl Bromide	(4)	(5)	<2.0 ug/L	G	2/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	(4)	(5)	<1.0 ug/L	G	2/5 YR
127-18-4	Tetrachloroethylene	624	10.0	<1.0 ug/L	G	2/5 YR
10-88-3	Toluene	624	10.0	<1.0 ug/L	G	2/5 YR
79-00-5	1,1,2-Trichloroethane	(4)	(5)	<1.0 ug/L	G	2/5 YR
79-01-6	Trichloroethylene	624	10.0	<1.0 ug/L	G	2/5 YR
75-01-4	Vinyl Chloride	624	10.0	<2.0 ug/L	G	2/5 YR
ACID EXTRACTABLES (6)						
95-57-8	2-Chlorophenol	625	10.0	<7.6 ug/L	G or SC	2/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0	<7.6 ug/L	G or SC	2/5 YR
105-67-9	2,4 Dimethylphenol	625	10.0	<7.6 ug/L	G or SC	2/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMP FREQUE
51-28-5	2,4-Dinitrophenol	(4)	(5)	<15.2 ug/L	G or SC	2/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	(5)	<7.6 ug/L	G or SC	2/5 YR
87-86-5	Pentachlorophenol	625	50.0	<15.2 ug/L	G or SC	2/5 YR
108-95-2	Phenol	625	10.0	<7.6 ug/L	G or SC	2/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0	<7.6 ug/L	G or SC	2/5 YR
MISCELLANEOUS						
	Ammonia as NH3-N	350.1	200	0.060 mg/L	C	2/5 YR
7782-50-5	Chlorine Produced Oxidant	(4)	(5)	Not Required	G	2/5 YR
7782-50-5	Chlorine, Total Residual	(4)	100	0.07 mg/L	G	2/5 YR
57-12-5	Cyanide, Total	(4)	10.0	<0.0050 mg/L	G	2/5 YR
N/A	*E. coli* / *Enterococcus* (N/CML)	(4)	(5)	>201 col/100ml	G	2/5 YR
7783-06-4	Hydrogen Sulfide	(4)	(5)	<1.0 mg/L	G or SC	2/5 YR
60-10-5	Tributyltin [7]	NBSR 85-3295	(5)	<0.16 ug/L	G or C	2/5 YR

Walter Legg / Environmental Site Manager

Name of Principal Exec. Officer or Authorized Agent/Title

01-10-2012

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

FOOTNOTES:

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

The quantification levels indicated for the metals are actually Specific Target Values developed for this permit. The Specific Target Value is the approximate value that may initiate a wasteload allocation analysis. Target values are not wasteload allocations or effluent limitations. The Specific Target Values are subject to change based on additional information such as hardness data, receiving stream flow, and design flows.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

(2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour \ composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period.

SC = Special Composite = samples for base/neutral/acid compounds, PCBs, and pesticides must be collected as 4 individual grab samples taken proportional to flow at 6-hour intervals over the course of one day. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period. Grab samples must be analyzed separately and the concentrations averaged. Alternately, grab samples may be collected in the field and composited in the laboratory if the compositing procedure produces results equivalent to results produced by arithmetic averaging of the results of analysis of individual grab samples.

(3) A specific analytical method is not specified; however a target value for each metal has been established. An appropriate method to meet the target value shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

Metal	Analytical Method
Antimony	1638; 1639
Arsenic	206.5; 1632
Chromium[9]	1639
Cadmium	1637; 1638; 1639; 1640
Chromium VI	218.6; 1639
Copper	1638; 1640
Lead	1637; 1638; 1640
Mercury	245.7; 1631
Nickel	1638; 1639; 1640
Selenium	1638; 1639
Silver	1638
Zinc	1638; 1639

(4) Any approved method presented in 40 CFR Part 136.

(5) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

(6) Testing for phenol requires continuous extraction.

(7) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1996].

(8) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].

(9) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270D.

ALS Environmental

34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

January 5, 2012

Ms. Sara McGarity
Tidewater, Inc.-MD
7161 Columbia Gateway Drive
Suite C
Columbia, MD 21046

Certificate of Analysis

Project Name:	**2011-STORMWATER PERMIT**	Workorder:	**9928769**
Purchase Order:		Workorder ID:	**2011-STORMWATER PERMIT**

Dear Ms. McGarity,

Enclosed are the analytical results for samples received by the laboratory on Friday, September 23, 2011.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Tonya Hironimus (Project Coordinator) or Anna G Milliken (Technical Manager) at (717) 944-5541.

Please visit us at www.analyticallab.com for a listing of ALS' NELAP accreditations and Scope of Work, as well as other links to Water Quality documentation on the internet.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

CC: General Email Address

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Anna G Milliken
Technical Manager

ENCLOSURE (2)

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SAMPLE SUMMARY

Workorder: 9928769 2011-STORMWATER PERMIT

Discard Date: 01/19/2012

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
9928769001	SW009	Water	9/23/11 10:04	9/23/11 21:05	Customer
9928769002	SW003	Water	9/23/11 10:10	9/23/11 21:05	Customer

Workorder Comments:

This report was modified to show the MDL, RDL and J flags as requested by Tidewater. This report was also modified to include permitted compounds. TMH 1/5/12

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.

Standard Acronyms/Flags

J, B	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference

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ANALYTICAL RESULTS

Workorder: 9928769 2011-STORMWATER PERMIT

Lab ID: **9928769001** Date Collected: 9/23/2011 10:04 Matrix: Water

Sample ID: **SW009** Date Received: 9/23/2011 21:05

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acrolein	<30.0	ug/L		30.0	2.4	EPA 624			9/29/11 03:11	MES	A
Acrylonitrile	<5.0	ug/L		5.0	0.89	EPA 624			9/29/11 03:11	MES	A
Benzene	<1.0	ug/L		1.0	0.16	EPA 624			9/29/11 03:11	MES	A
Bromodichloromethane	<1.0	ug/L		1.0	0.13	EPA 624			9/29/11 03:11	MES	A
Bromoform	<2.0	ug/L		2.0	0.21	EPA 624			9/29/11 03:11	MES	A
Bromomethane	<2.0	ug/L		2.0	0.27	EPA 624			9/29/11 03:11	MES	A
Carbon Tetrachloride	<1.0	ug/L		1.0	0.24	EPA 624			9/29/11 03:11	MES	A
Chlorobenzene	<1.0	ug/L		1.0	0.11	EPA 624			9/29/11 03:11	MES	A
Chlorodibromomethane	<1.0	ug/L		1.0	0.22	EPA 624			9/29/11 03:11	MES	A
Chloroethane	<1.0	ug/L		1.0	0.24	EPA 624			9/29/11 03:11	MES	A
2-Chloroethylvinyl ether	<2.0	ug/L	1,2	2.0	0.28	EPA 624			9/29/11 03:11	MES	A
Chloroform	<1.0	ug/L		1.0	0.15	EPA 624			9/29/11 03:11	MES	A
1,2-Dichlorobenzene	<1.0	ug/L		1.0	0.20	EPA 624			9/29/11 03:11	MES	A
1,3-Dichlorobenzene	<1.0	ug/L		1.0	0.14	EPA 624			9/29/11 03:11	MES	A
1,4-Dichlorobenzene	<1.0	ug/L		1.0	0.15	EPA 624			9/29/11 03:11	MES	A
1,2-Dichloroethane	<1.0	ug/L		1.0	0.22	EPA 624			9/29/11 03:11	MES	A
1,1-Dichloroethene	<1.0	ug/L		1.0	0.17	EPA 624			9/29/11 03:11	MES	A
trans-1,2-Dichloroethene	<1.0	ug/L		1.0	0.12	EPA 624			9/29/11 03:11	MES	A
1,2-Dichloropropane	<1.0	ug/L		1.0	0.24	EPA 624			9/29/11 03:11	MES	A
1,3-Dichloropropene, Total	<1.0	ug/L		1.0	0.19	EPA 624			9/29/11 03:11	MES	A
Ethylbenzene	<1.0	ug/L		1.0	0.16	EPA 624			9/29/11 03:11	MES	A
Methylene Chloride	0.79J	ug/L		1.0	0.32	EPA 624			9/29/11 03:11	MES	A
1,1,2,2-Tetrachloroethane	<1.0	ug/L		1.0	0.22	EPA 624			9/29/11 03:11	MES	A
Tetrachloroethene	<1.0	ug/L		1.0	0.26	EPA 624			9/29/11 03:11	MES	A
Toluene	<1.0	ug/L		1.0	0.12	EPA 624			9/29/11 03:11	MES	A
1,1,2-Trichloroethane	<1.0	ug/L		1.0	0.30	EPA 624			9/29/11 03:11	MES	A
Trichloroethene	<1.0	ug/L		1.0	0.21	EPA 624			9/29/11 03:11	MES	A
Vinyl Chloride	<2.0	ug/L		2.0	0.24	EPA 624			9/29/11 03:11	MES	A
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	101	%		72-142		EPA 624			9/29/11 03:11	MES	A
4-Bromofluorobenzene (S)	82.5	%		73-119		EPA 624			9/29/11 03:11	MES	A
Dibromofluoromethane (S)	96.5	%		74-132		EPA 624			9/29/11 03:11	MES	A
Toluene-d8 (S)	110	%		75-133		EPA 624			9/29/11 03:11	MES	A
SEMIVOLATILES											
Acenaphthene	<1.4	ug/L		1.4	0.48	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Anthracene	<1.4	ug/L		1.4	0.42	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Benzidine	<28.4	ug/L	3,4	28.4	9.5	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Benzo(a)anthracene	<1.4	ug/L		1.4	0.30	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Benzo(a)pyrene	<1.4	ug/L		1.4	0.31	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1

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ANALYTICAL RESULTS

Workorder: 9928769 2011-STORMWATER PERMIT

Lab ID: **9928769001** Date Collected: 9/23/2011 10:04 Matrix: Water

Sample ID: **SW009** Date Received: 9/23/2011 21:05

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Benzo(b)fluoranthene	<1.4	ug/L		1.4	0.32	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Benzo(k)fluoranthene	<1.4	ug/L		1.4	0.36	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Butylbenzylphthalate	<2.8	ug/L		2.8	0.45	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
bis(2-Chloroethyl)ether	<2.8	ug/L		2.8	0.47	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
bis(2-Chloroisopropyl)ether	<2.8	ug/L		2.8	0.59	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
2-Chloronaphthalene	<2.8	ug/L		2.8	0.37	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
2-Chlorophenol	<7.6	ug/L		7.6	0.80	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Chrysene	<1.4	ug/L		1.4	0.31	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Di-n-Butylphthalate	<2.8	ug/L		2.8	0.42	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Dibenzo(a,h)anthracene	<1.9	ug/L		1.9	0.89	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
3,3-Dichlorobenzidine	<15.2	ug/L		15.2	2.6	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
2,4-Dichlorophenol	<7.6	ug/L		7.6	0.58	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Diethylphthalate	<7.6	ug/L		7.6	0.31	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
2,4-Dimethylphenol	<7.6	ug/L		7.6	2.0	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Dimethylphthalate	<7.6	ug/L		7.6	0.51	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
2,4-Dinitrophenol	<15.2	ug/L		15.2	3.4	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
2,4-Dinitrotoluene	<2.8	ug/L		2.8	0.37	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
1,2-Diphenylhydrazine	<2.8	ug/L		2.8	0.56	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
bis(2-Ethylhexyl)phthalate	1.6J	ug/L		2.8	0.55	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Fluoranthene	<1.4	ug/L		1.4	0.33	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Fluorene	<1.4	ug/L		1.4	0.38	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Hexachlorobenzene	<2.8	ug/L		2.8	0.51	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Hexachlorobutadiene	<2.8	ug/L		2.8	0.47	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Hexachlorocyclopentadiene	<7.6	ug/L		7.6	1.1	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Hexachloroethane	<2.8	ug/L		2.8	0.82	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Indeno(1,2,3-cd)pyrene	<1.4	ug/L		1.4	0.25	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Isophorone	<2.8	ug/L		2.8	0.58	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Kepone	<15.2	ug/L		15.2	0.35	EPA 625	9/28/11	RDT	10/7/11 02:00	SAS	I2
						Appendix 9 Part A					
2-Methyl-4,6-dinitrophenol	<7.6	ug/L		7.6	2.3	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Nitrobenzene	<2.8	ug/L		2.8	0.65	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
N-Nitrosodimethylamine	<2.8	ug/L		2.8	1.2	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
N-Nitroso-di-n-propylamine	<2.8	ug/L		2.8	0.53	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
N-Nitrosodiphenylamine	<2.8	ug/L		2.8	0.79	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Pentachlorophenol	<15.2	ug/L		15.2	2.5	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Phenol	<7.6	ug/L		7.6	0.68	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Pyrene	<1.4	ug/L		1.4	0.48	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
1,2,4-Trichlorobenzene	<2.8	ug/L		2.8	0.61	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
2,4,6-Trichlorophenol	<7.6	ug/L		7.6	0.52	EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	72.8	%		38-134		EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1

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ANALYTICAL RESULTS

Workorder: 9928769 2011-STORMWATER PERMIT

Lab ID: **9928769001** Date Collected: 9/23/2011 10:04 Matrix: Water

Sample ID: **SW009** Date Received: 9/23/2011 21:05

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
2-Fluorobiphenyl (S)	64.4	%		37-113		EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
2-Fluorophenol (S)	38.7	%		17-73		EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Nitrobenzene-d5 (S)	64.2	%		37-124		EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Phenol-d5 (S)	23.6	%		11-53		EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Terphenyl-d14 (S)	89.3	%		33-125		EPA 625	9/28/11	RDT	10/5/11 09:37	CGS	I1
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	102	%		40-125		EPA 625 Appendix 9 Part A	9/28/11	RDT	10/7/11 02:00	SAS	I2
2-Fluorobiphenyl (S)	80.1	%		32-108		EPA 625 Appendix 9 Part A	9/28/11	RDT	10/7/11 02:00	SAS	I2
2-Fluorophenol (S)	45	%		20-70		EPA 625 Appendix 9 Part A	9/28/11	RDT	10/7/11 02:00	SAS	I2
Nitrobenzene-d5 (S)	77.6	%		31-110		EPA 625 Appendix 9 Part A	9/28/11	RDT	10/7/11 02:00	SAS	I2
Phenol-d5 (S)	28.2	%		10-49		EPA 625 Appendix 9 Part A	9/28/11	RDT	10/7/11 02:00	SAS	I2
Terphenyl-d14 (S)	109	%		27-136		EPA 625 Appendix 9 Part A	9/28/11	RDT	10/7/11 02:00	SAS	I2
Pesticides and PCBs											
Aldrin	<0.024	ug/L		0.024	0.0085	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
alpha-BHC	<0.024	ug/L		0.024	0.012	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
beta-BHC	<0.024	ug/L		0.024	0.012	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
gamma-BHC	<0.024	ug/L		0.024	0.016	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Chlordane	<0.48	ug/L		0.48	0.086	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
4,4'-DDD	<0.024	ug/L		0.024	0.012	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
4,4'-DDE	<0.024	ug/L		0.024	0.011	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
4,4'-DDT	<0.024	ug/L		0.024	0.012	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Dieldrin	<0.024	ug/L		0.024	0.012	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Endosulfan I	<0.024	ug/L		0.024	0.011	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Endosulfan II	<0.024	ug/L		0.024	0.014	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Endosulfan Sulfate	<0.024	ug/L		0.024	0.012	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Endrin	<0.024	ug/L		0.024	0.012	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Endrin Aldehyde	<0.024	ug/L		0.024	0.013	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Heptachlor	<0.024	ug/L		0.024	0.018	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Heptachlor Epoxide	<0.024	ug/L		0.024	0.012	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Methoxychlor	<0.024	ug/L		0.024	0.013	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Mirex	<0.024	ug/L		0.024	0.011	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1

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ANALYTICAL RESULTS

Workorder: 9928769 2011-STORMWATER PERMIT

Lab ID: **9928769001** Date Collected: 9/23/2011 10:04 Matrix: Water

Sample ID: **SW009** Date Received: 9/23/2011 21:05

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Toxaphene	<0.96	ug/L		0.96	0.096	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Aroclor-1016	<0.48	ug/L		0.48	0.21	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Aroclor-1221	<0.48	ug/L		0.48	0.32	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Aroclor-1232	<0.48	ug/L		0.48	0.39	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Aroclor-1242	<0.48	ug/L		0.48	0.23	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Aroclor-1248	<0.48	ug/L		0.48	0.18	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Aroclor-1254	<0.48	ug/L		0.48	0.30	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Aroclor-1260	<0.48	ug/L		0.48	0.21	EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	66.1	%		30-150		EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
Tetrachloro-m-xylene (S)	74.3	%		36-112		EPA 608	9/30/11	SMD	10/4/11 00:31	KJH	K1
ORGANOPHOSPHORUS COMPOUNDS											
Azinphos Methyl	<0.95	ug/L		0.95	0.20	EPA 622	9/29/11	LEH	10/4/11 14:01	KJH	Q1
Chlorpyrifos	<0.95	ug/L		0.95	0.23	EPA 622	9/29/11	LEH	10/4/11 14:01	KJH	Q1
Demeton	<1.9	ug/L		1.9	0.21	EPA 622	9/29/11	LEH	10/4/11 14:01	KJH	Q1
Malathion	<1.9	ug/L		1.9	0.17	EPA 622	9/29/11	LEH	10/4/11 14:01	KJH	Q1
Parathion	<0.95	ug/L		0.95	0.086	EPA 622	9/29/11	LEH	10/4/11 14:01	KJH	Q1
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
IS_Triphenylphosphate (S)	87.4	%		50-143		EPA 622	9/29/11	LEH	10/4/11 14:01	KJH	Q1
METALS											
Trivalent Chromium	<0.010	mg/L		0.010	0.010	Calculation			10/12/11 01:10	NJA	r
Antimony, Dissolved	<0.0020	mg/L		0.0020	0.00066	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
Arsenic, Dissolved	0.0018J	mg/L		0.0030	0.0010	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
Cadmium, Dissolved	<0.0010	mg/L		0.0010	0.00033	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
Chromium, Dissolved	<0.0020	mg/L		0.0020	0.00066	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
Copper, Dissolved	0.0076	mg/L		0.0050	0.0016	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
Lead, Dissolved	0.00095J	mg/L		0.0020	0.00066	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
Mercury, Dissolved	<0.00020	mg/L		0.00020	0.000066	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
Nickel, Dissolved	0.0016J	mg/L		0.0050	0.0016	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
Selenium, Dissolved	<0.0050	mg/L		0.0050	0.0016	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
Silver, Dissolved	<0.0020	mg/L		0.0020	0.00066	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
Thallium, Dissolved	<0.0010	mg/L		0.0010	0.00033	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
Zinc, Dissolved	0.029	mg/L		0.0050	0.0016	EPA 200.8	10/3/11	LAM	10/4/11 23:09	AJB	n1
WET CHEMISTRY											
Ammonia-N	0.060J	mg/L		0.100	0.04	D6919-03			10/4/11 22:26	EZ	z
Chlorine, Total Residual	0.022J	mg/L		0.10	0.01	SM20-4500-Cl G			9/24/11 04:42	MBW	r
Cyanide, Total	<0.0050	mg/L		0.0050	0.0022	EPA 335.4	9/27/11	ARK	9/29/11 05:23	KRK	k

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State Certifications: CT PH-0224 , DE ID 11 , GA 914 , MA PA0102 , MD 128 , LA 04162 , VA 421 , WY EPA Region 8 , WV 343

ANALYTICAL RESULTS

Workorder: 9928769 2011-STORMWATER PERMIT

Lab ID: **9928769001** Date Collected: 9/23/2011 10:04 Matrix: Water

Sample ID: **SW009** Date Received: 9/23/2011 21:05

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Hexavalent Chromium	<0.010	mg/L	5	0.010		SM20-3500-Cr D			9/28/11 04:41	MBW	r
Hydrogen Sulfide	<1.0	mg/L		1.0	1	SM20-4500S2H			9/30/11 15:54	JWB	l
pH	7.01	pH_Units	5			SM20-4500-H B			9/28/11 12:47	MBW	r
Specific Conductance	40	umhos/cm		1	1	SM20-2510 B			9/28/11 12:47	MBW	r
Sulfide, Total	<1.0	mg/L		1.0	0.35	SM20-4500S2F			9/30/11 14:35	LMM	l
MICROBIOLOGY											
E. Coli	>201 col/100ml	col/100mL		1		SM20-9223			9/24/11 22:25	MBR	S

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS

Workorder: 9928769 2011-STORMWATER PERMIT

Lab ID: **9928769002** Date Collected: 9/23/2011 10:10 Matrix: Water

Sample ID: **SW003** Date Received: 9/23/2011 21:05

Parameters	Results	Units	Footnotes	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
PETROLEUM HC's											
Diesel Range Organics C10-C28	0.44	mg/L		0.16	0.022	SW846 8015C	9/27/11	GMG	10/1/11 09:32	KJH	A1
Surrogate Recoveries	*Results*	*Units*	*Footnotes*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
o-Terphenyl (S)	73.2	%		26-139		SW846 8015C	9/27/11	GMG	10/1/11 09:32	KJH	A1

Sample Comments:

Anna G Milliken
Technical Manager

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ANALYTICAL RESULTS QUALIFIERS\FLAGS

Workorder: 9928769 2011-STORMWATER PERMIT

PARAMETER QUALIFIERS\FLAGS

[1] The QC sample type MS for method EPA 624 was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 0 and the control limits were 1 to 305.

[2] The QC sample type MSD for method EPA 624 was outside the control limits for the analyte 2-Chloroethylvinyl ether. The % Recovery was reported as 0 and the control limits were 1 to 305.

[3] The QC sample type LCS for method EPA 625 was outside the control limits for the analyte Benzidine. The % Recovery was reported as 0 and the control limits were 5 to 248.

[4] The QC sample type MS for method EPA 625 was outside the control limits for the analyte Benzidine. The % Recovery was reported as 0 and the control limits were 5 to 248.

[5] Analyte was analyzed past the 24 hour holding time.

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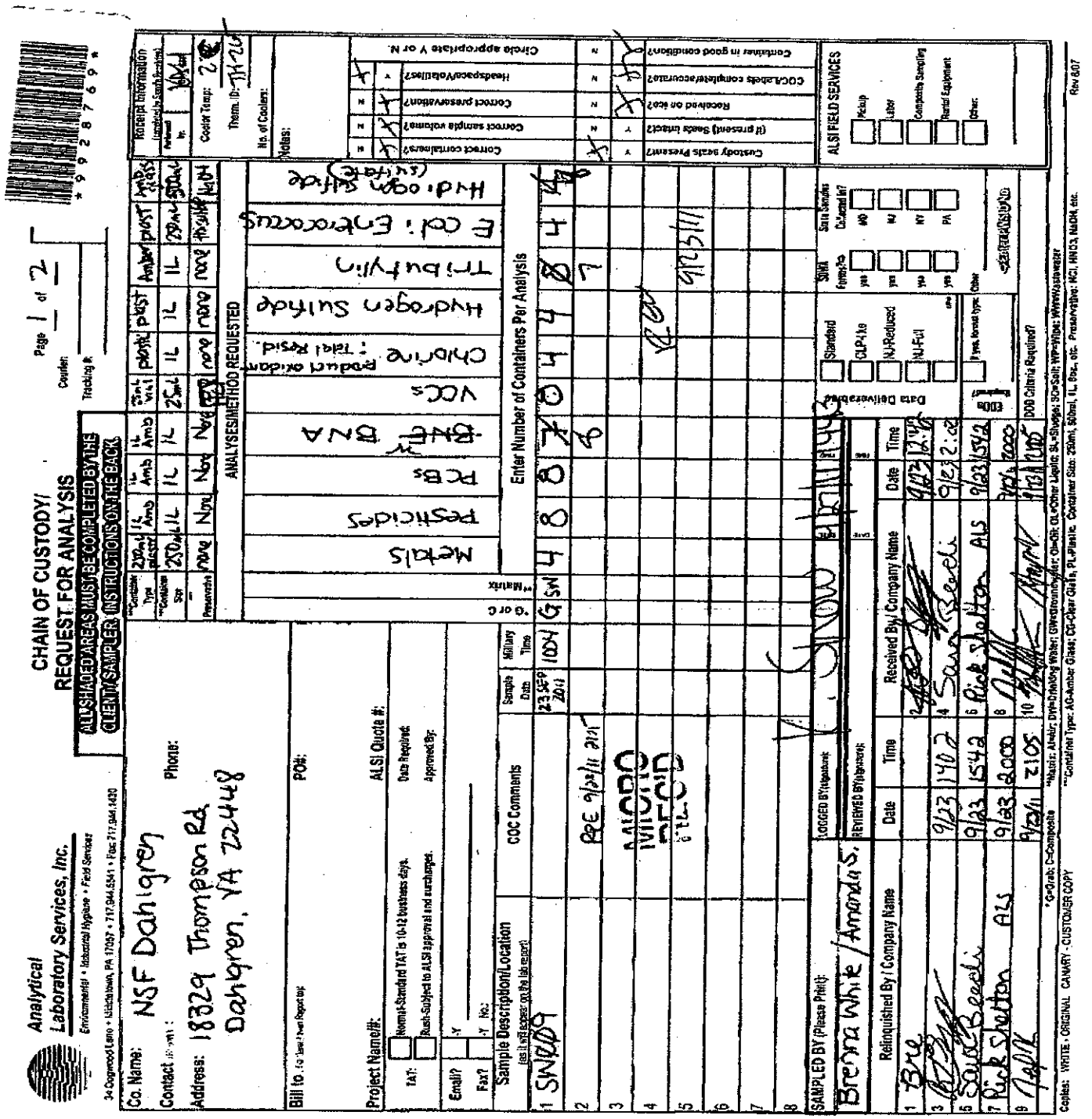

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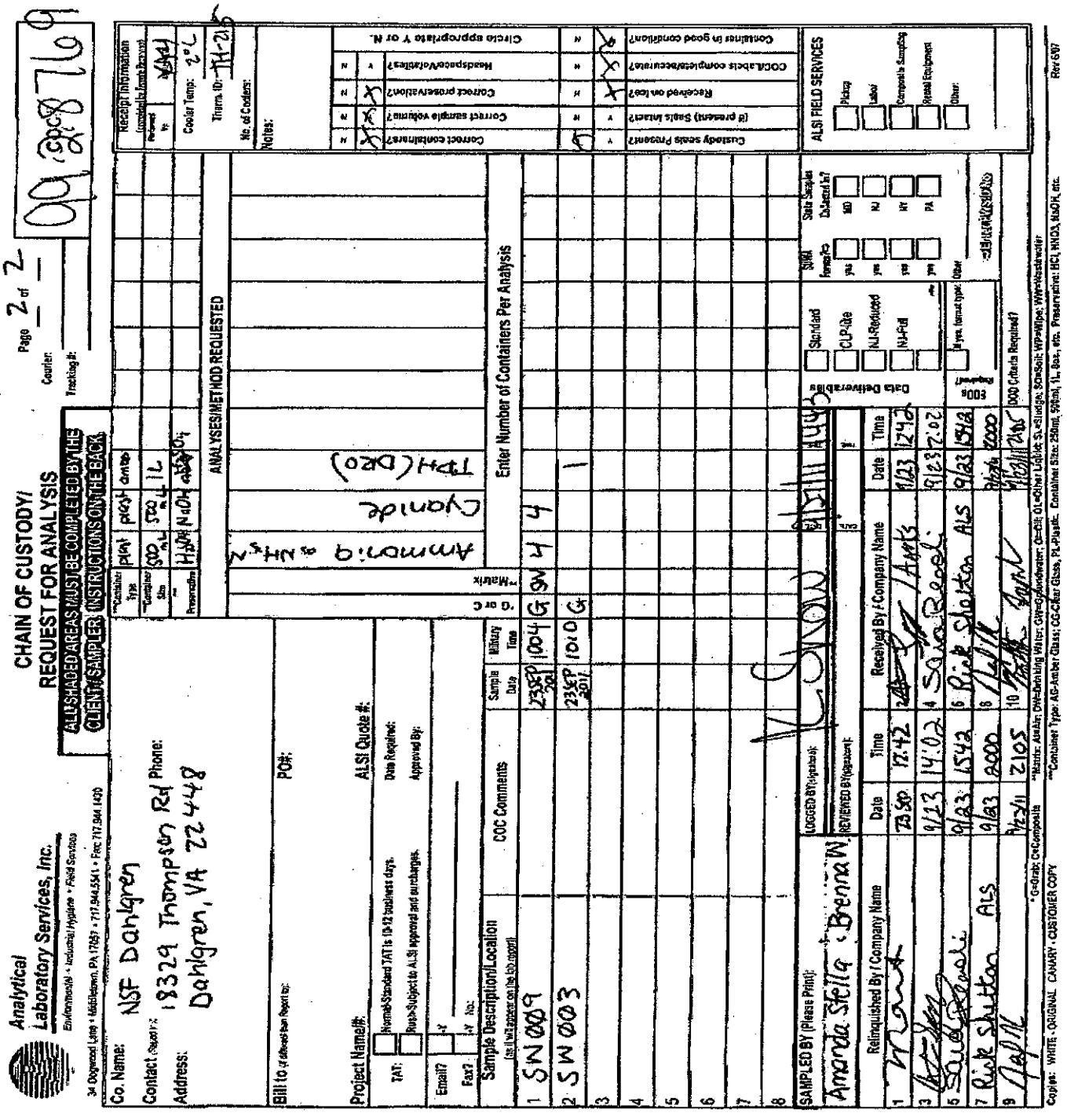

ATTACHMENT A
DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER QUALITY CRITERIA MONITORING

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
METALS						
7440-36-0	Antimony, dissolved	(3)	(3)		G or C	2/5 YR
7440-38-2	Arsenic, dissolved	(3)	(3)		G or C	2/5 YR
7440-43-9	Cadmium, dissolved	(3)	(3)		G or C	2/5 YR
16065-83-1	Chromium III, dissolved [4]	(3)	(3)		G or C	2/5 YR
18540-29-9	Chromium VI, dissolved [5]	(3)	(3)		G or C	2/5 YR
7440-50-8	Copper, dissolved	(3)	(3)		G or C	2/5 YR
7439-92-1	Lead, dissolved	(3)	(3)		G or C	2/5 YR
7439-97-6	Mercury, dissolved	(3)	(3)		G or C	2/5 YR
7440-02-0	Nickel, dissolved	(3)	(3)		G or C	2/5 YR
7782-49-2	Selenium, dissolved	(3)	(3)		G or C	2/5 YR
7440-22-4	Silver, dissolved	(3)	(3)		G or C	2/5 YR
7440-28-0	Thallium, dissolved	(4)	(5)		G or C	2/5 YR
7440-66-6	Zinc, dissolved	(3)	(3)		G or C	2/5 YR
PESTICIDES/PCB'S						
309-00-2	Aldrin	608	0.05		G or SC	2/5 YR
57-74-9	Chlordane	608	0.2		G or SC	2/5 YR
2921-88-2	Chlorpyrifos (synonym = Dursban)	622	(5)		G or SC	2/5 YR
72-54-8	DDD	608	0.1		G or SC	2/5 YR
72-55-9	DDE	608	0.1		G or SC	2/5 YR
50-29-3	DDT	608	0.1		G or SC	2/5 YR
8065-48-3	Demeton	(4)	(5)		G or SC	2/5 YR
60-57-1	Dieldrin	608	0.1		G or SC	2/5 YR
959-98-8	Alpha-Endosulfan	608	0.1		G or SC	2/5 YR
33213-65-9	Beta-Endosulfan	608	0.1		G or SC	2/5 YR
1031-07-8	Endosulfan Sulfate	608	0.1		G or SC	2/5 YR
72-20-8	Endrin	608	0.1		G or SC	2/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
7421-93-4	Endrin Aldehyde	(4)	(5)		G or SC	2/5 YR
86-50-0	Guthion	622	(5)		G or SC	2/5 YR
76-44-8	Heptachlor	608	0.05		G or SC	2/5 YR
1024-57-3	Heptachlor Epoxide	(4)	(5)		G or SC	2/5 YR
319-84-6	Hexachlorocyclohexane Alpha-BHC	608	(5)		G or SC	2/5 YR
319-85-7	Hexachlorocyclohexane Beta-BHC	608	(5)		G or SC	2/5 YR
58-89-9	Hexachlorocyclohexane Gamma-BHC or Lindane	608	(5)		G or SC	2/5 YR
143-50-0	Kepone	(9)	(5)		G or SC	2/5 YR
121-75-5	Malathion	(4)	(5)		G or SC	2/5 YR
72-43-5	Methoxychlor	(4)	(5)		G or SC	2/5 YR
2385-85-5	Mirex	(4)	(5)		G or SC	2/5 YR
56-38-2	Parathion	(4)	(5)		G or SC	2/5 YR
11096-82-5	PCB 1260	608	1.0		G or SC	2/5 YR
11097-69-1	PCB 1254	608	1.0		G or SC	2/5 YR
12672-29-6	PCB 1248	608	1.0		G or SC	2/5 YR
53469-21-9	PCB 1242	608	1.0		G or SC	2/5 YR
11141-16-5	PCB 1232	608	1.0		G or SC	2/5 YR
11104-28-2	PCB 1221	608	1.0		G or SC	2/5 YR
12674-11-2	PCB 1016	608	1.0		G or SC	2/5 YR
1336-36-3	PCB Total	608	7.0		G or SC	2/5 YR
8001-35-2	Toxephene	608	5.0		G or SC	2/5 YR
	BASE NEUTRAL EXTRACTABLES					
83-32-9	Acenaphthene	625	10.0		G or SC	2/5 YR
120-12-7	Anthracene	625	10.0		G or SC	2/5 YR
92-87-5	Benzidine	(4)	(5)		G or SC	2/5 YR
56-55-3	Benzo (a) anthracene	625	10.0		G or SC	2/5 YR
205-99-2	Benzo (b) fluoranthene	625	10.0		G or SC	2/5 YR
207-08-9	Benzo (k) fluoranthene	625	10.0		G or SC	2/5 YR
50-32-8	Benzo (a) pyrene	625	10.0		G or SC	2/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
111-44-4	Bis 2-Chloroethyl Ether	(4)	(5)		G or SC	2/5 YR
39638-32-9	Bis 2-Chloroisopropyl Ether	(4)	(5)		G or SC	2/5 YR
85-68-7	Butyl benzyl phthalate	625	10.0		G or SC	2/5 YR
91-58-7	2-Chloronaphthalene	(4)	(5)		G or SC	2/5 YR
218-01-9	Chrysene	625	10.0		G or SC	2/5 YR
53-70-3	Dibenz(a,h)anthracene	625	20.0		G or SC	2/5 YR
84-74-2	Dibutyl phthalate (synonym = Di-n-Butyl Phthalate)	625	10.0		G or SC	2/5 YR
95-50-1	1,2-Dichlorobenzene	624	10.0		G or SC	2/5 YR
541-73-1	1,3-Dichlorobenzene	624	10.0		G or SC	2/5 YR
106-46-7	1,4-Dichlorobenzene	624	10.0		G or SC	2/5 YR
91-94-1	3,3-Dichlorobenzidine	(4)	(5)		G or SC	2/5 YR
84-66-2	Diethyl phthalate	625	10.0		G or SC	2/5 YR
117-81-7	Di-2-Ethylhexyl Phthalate	625	10.0		G or SC	2/5 YR
131-11-3	Dimethyl phthalate	(4)	(5)		G or SC	2/5 YR
121-14-2	2,4-Dinitrotoluene	625	10.0		G or SC	2/5 YR
122-66-7	1,2-Diphenylhydrazine	(4)	(5)		G or SC	2/5 YR
206-44-0	Fluoranthene	625	10.0		G or SC	2/5 YR
86-73-7	Fluorene	625	10.0		G or SC	2/5 YR
118-74-1	Hexachlorobenzene	(4)	(5)		G or SC	2/5 YR
87-68-3	Hexachlorobutadiene	(4)	(5)		G or SC	2/5 YR
77-47-4	Hexachlorocyclopentadiene	(4)	(5)		G or SC	2/5 YR
67-72-1	Hexachloroethane	(4)	(5)		G or SC	2/5 YR
193-39-5	Indeno(1,2,3-cd)pyrene	625	20.0		G or SC	2/5 YR
78-59-1	Isophorone	625	10.0		G or SC	2/5 YR
98-95-3	Nitrobenzene	625	10.0		G or SC	2/5 YR
62-75-9	N-Nitrosodimethylamine	(4)	(5)		G or SC	2/5 YR
621-64-7	N-Nitrosodi-n-propylamine	(4)	(5)		G or SC	2/5 YR
86-30-6	N-Nitrosodiphenylamine	(4)	(5)		G or SC	2/5 YR
129-00-0	Pyrene	625	10.0		G or SC	2/5 YR
120-82-1	1,2,4-Trichlorobenzene	625	10.0		G or SC	2/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[3]	SAMPLE FREQUENCY
VOLATILES						
107-02-8	Acrolein	(4)	(5)		G	2/5 YR
107-13-1	Acrylonitrile	(4)	(5)		G	2/5 YR
71-43-2	Benzene	624	10.0		G	2/5 YR
75-25-2	Bromoform	624	10.0		G	2/5 YR
56-23-5	Carbon Tetrachloride	624	10.0		G	2/5 YR
108-90-7	Chlorobenzene (synonym = monochlorobenzene)	624	50.0		G	2/5 YR
124-48-1	Chlorodibromomethane	624	10.0		G	2/5 YR
67-66-3	Chloroform	624	10.0		G	2/5 YR
75-09-2	Dichloromethane (synonym = methylene chloride)	624	20.0		G	2/5 YR
75-27-4	Dichlorobromomethane	624	10.0		G	2/5 YR
107-06-2	1,2-Dichloroethane	624	10.0		G	2/5 YR
75-35-4	1,1-Dichloroethylene	624	10.0		G	2/5 YR
156-60-5	1,2-trans-dichloroethylene	(4)	(5)		G	2/5 YR
78-87-5	1,2-Dichloropropane	(4)	(5)		G	2/5 YR
542-75-6	1,3-Dichloropropene	(4)	(5)		G	2/5 YR
100-41-4	Ethylbenzene	624	10.0		G	2/5 YR
74-83-9	Methyl Bromide	(4)	(5)		G	2/5 YR
79-34-5	1,1,2,2-Tetrachloroethane	(4)	(5)		G	2/5 YR
127-18-4	Tetrachloroethylene	624	10.0		G	2/5 YR
10-88-3	Toluene	624	10.0		G	2/5 YR
79-00-5	1,1,2-Trichloroethane	(4)	(5)		G	2/5 YR
79-01-6	Trichloroethylene	624	10.0		G	2/5 YR
75-01-4	Vinyl Chloride	624	10.0		G	2/5 YR
ACID EXTRACTABLES [6]						
95-57-8	2-Chlorophenol	625	10.0		G or SC	2/5 YR
120-83-2	2,4 Dichlorophenol	625	10.0		G or SC	2/5 YR
105-67-9	2,4 Dimethylphenol	625	10.0		G or SC	2/5 YR

CASRN#	CHEMICAL	EPA ANALYSIS NO.	QUANTIFICATION LEVEL[1]	REPORTING RESULTS	SAMPLE TYPE[2]	SAMPLE FREQUENCY
51-28-5	2,4-Dinitrophenol	(4)	(5)		G or SC	2/5 YR
534-52-1	2-Methyl-4,6-Dinitrophenol	(4)	(5)		G or SC	2/5 YR
87-86-5	Pentachlorophenol	625	50.0		G or SC	2/5 YR
108-95-2	Phenol	625	10.0		G or SC	2/5 YR
88-06-2	2,4,6-Trichlorophenol	625	10.0		G or SC	2/5 YR
MISCELLANEOUS						
	Ammonia as NH3-N	350.1	200		C	2/5 YR
7782-50-5	Chlorine Produced Oxidant	(4)	(5)		G	2/5 YR
7782-50-5	Chlorine, Total Residual	(4)	100		G	2/5 YR
57-12-5	Cyanide, Total	(4)	10.0		G	2/5 YR
N/A	*E. coli* / *Enterococcus* (N/CML)	(4)	(5)		G	2/5 YR
7783-06-4	Hydrogen Sulfide	(4)	(5)		G or SC	2/5 YR
60-10-5	Tributyltin [7]	NBSR 85-3295	(5)		G or C	2/5 YR

Name of Principal Exec. Officer or Authorized Agent/Title

Signature of Principal Officer or Authorized Agent/Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. Sec. 1001 and 33 U.S.C. Sec. 1319. (Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)

FOOTNOTES:

(1) Quantification level (QL) is defined as the lowest concentration used for the calibration of a measurement system when the calibration is in accordance with the procedures published for the required method.

The quantification levels indicated for the metals are actually Specific Target Values developed for this permit. The Specific Target Value is the approximate value that may initiate a wasteload allocation analysis. Target values are not wasteload allocations or effluent limitations. The Specific Target Values are subject to change based on additional information such as hardness data, receiving stream flow, and design flows.

Units for the quantification level are micrograms/liter unless otherwise specified.

Quality control and quality assurance information shall be submitted to document that the required quantification level has been attained.

(2) Sample Type

G = Grab = An individual sample collected in less than 15 minutes. Substances specified with "grab" sample type shall only be collected as grabs. The permittee may analyze multiple grabs and report the average results provided that the individual grab results are also reported. For grab metals samples, the individual samples shall be filtered and preserved immediately upon collection.

C = Composite = A 24-hour composite unless otherwise specified. The composite shall be a combination of individual samples, taken proportional to flow, obtained at hourly or smaller time intervals. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period.

SC = Special Composite = samples for base/neutral/acid compounds, PCBs, and pesticides must be collected as 4 individual grab samples taken proportional to flow at 6-hour intervals over the course of one day. The individual samples may be of equal volume for flows that do not vary by +/- 10 percent over a 24-hour period. Grab samples must be analyzed separately and the concentrations averaged. Alternately, grab samples may be collected in the field and composited in the laboratory if the compositing procedure produces results equivalent to results produced by arithmetic averaging of the results of analysis of individual grab samples.

(3) A specific analytical method is not specified; however a target value for each metal has been established. An appropriate method to meet the target value shall be selected from the following list of EPA methods (or any approved method presented in 40 CFR Part 136). If the test result is less than the method QL, a "<[QL]" shall be reported where the actual analytical test QL is substituted for [QL].

Metal	Analytical Method
Antimony	1638; 1639
Arsenic	206.5; 1632
Chromium[9]	1639
Cadmium	1637; 1638; 1639; 1640
Chromium VI	218.6; 1639
Copper	1638; 1640
Lead	1637; 1638; 1640
Mercury	245.7; 1631
Nickel	1638; 1639; 1640
Selenium	1638; 1639
Silver	1638
Zinc	1638; 1639

(4) Any approved method presented in 40 CFR Part 136.

(5) The QL is at the discretion of the permittee. For any substances addressed in 40 CFR Part 136, the permittee shall use one of the approved methods in 40 CFR Part 136.

(6) Testing for phenol requires continuous extraction.

(7) Analytical Methods: NBSR 85-3295 or DEQ's approved analysis for Tributyltin may also be used [See A Manual for the Analysis of Butyltins in Environmental Systems by the Virginia Institute of Marine Science, dated November 1998].

(8) Both Chromium III and Chromium VI may be measured by the total chromium analysis. If the result of the total chromium analysis is less than or equal to the lesser of the Chromium III or Chromium VI method QL, the results for both Chromium III and Chromium VI can be reported as "<[QL]", where the actual analytical test QL is substituted for [QL].

(9) The lab may use SW846 Method 8270D provided the lab has an Initial Demonstration of Capability, has passed a PT for Kepone, and meets the acceptance criteria for Kepone as given in Method 8270D

ESS
Environmental Systems Service, Ltd.

ACCREDITED IN ACCORDANCE WITH nelac

January 1, 2012

Customers of Environmental Systems Service, Ltd. (ESS):

ESS is in the process of upgrading our software and laboratory LIMS system. In the next couple of months, you will see changes to our analytical reports. Examples of some of the changes can be seen below. Please be patient with our staff as we work to make these necessary changes and improvements.

- The test results submitted in this report relate only to the samples submitted and as received by ESS.
- All Standard Methods performed by ESS are from the 19th edition, unless otherwise noted.
- ESS assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report.
- The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise noted.
- This laboratory report may not be reproduced, except in full, without the written approval of ESS.
- If you have received this report in error, please notify ESS immediately at (540) 825-6660.

Until these changes are in place, please continue to reference your respective Chain of Custody forms for sample dates and times.

If your samples were subcontracted (currently noted with an '*'), they were submitted to a VELAP and/or Drinking Water accredited laboratory, and that laboratory ID is available upon request.

ESS VELAP and Drinking Water Certificates can be viewed online at www.ess-services.com.

Thank you again for your continued patience as we strive to improve our reporting process.

Angie Woodward

VELAP ID # 460019 VA DW LAB ID # 00115

218 North Main Street * Culpeper, Virginia 22701 * Telephone 540-825-6660 * Fax 540-825-4961
500 Stone Street * Bedford, Virginia 24523* Telephone 540-586-5413* Fax 540-586-5530

ENVIRONMENTAL SYSTEMS SERVICE, LTD.

Page: 1

Work Order #: 22121
Contract #:
Customer #: 9096
Customer PO #:

NAVFAC
AMANDA STELLA/SARA MCGARITY
18329 THOMPSON ROAD SUITE 226
DAHLGREN, VA 22448

Job Location: NSF DAHLGREN
Collected by: CLIENT
Date Received: 12/07/2011

ANALYSIS REPORT

COMMENT: SAMPLE ANALYSIS PERFORMED BY DAT LABORATORY.

TAG #:	SAMPLE POINT:	SAMPLE DATE:
55753	NSF DAHLGREN OUTFALL 009	12/06/2011

Description	Result	Unit	Rpt. Limit	Method	Anlys Date	Time	Init
Tributyltin	<0.016	ug/l	0.016	NOAA 1993TBT	01/05/12	12:30	SM

Reviewed by: Angie Woodward
A. Woodward/Technical Director

Report Date: January 09, 2012
VA LAB ID# 460019
* Subcontracted test

SAMPLE CHAIN OF CUSTODY RECORD

ENVIRONMENTAL SYSTEMS SERVICE, LTD.

ESS Environmental Systems Service Ltd.

www.ess-services.com

218 North Main St.
Post Office Box 520
Culpeper, VA 22701
800-541-2118
540-825-6660 Fax 540-825-4961

500 Stone St.
Post Office Box 736
Bedford, VA 24523
540-586-5413
Fax 540-586-5630

Company NAVFAC
Contact Amanda Stella (NAVFAC / Sara McGarity (Tidewater)
Address 18329 Thompson Rd Suite 226
Address Dahlgren, VA 22448
Phone 540-653-1683 / amanda.stella@navy.mil

Project Name/Site NSF Dahlgren P.O.#

Sampled By: Amanda Stella (Print Name) (Signature)

ESS SAMPLE ID.	COLLECTION DATE	TIME	SAMPLE LOCATION	CONTAINERS SIZE	G/P	#	GRAB	COMP	SAMPLE MATRIX	PRESERVATIVE	ANALYSES: Tributyltin	COMMENTS
SW009	6 Dec 2011	1410	NSF Dahlgren outfall 009	1L	G	1	X			None	X	55753
												Analytical method NBSR 85-3295
												Assume low-level sample.
												Preservative
												pH Check:

Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
	7/Dec/11	1358			12/7/11	1545	
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received for Laboratory by:
					12-7-11	1545	A. Woodward

Method of Delivery:
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☐ UPS Overnight ☐ Post Office

On Ice? (Y) N
Received @ 4.4 C
☐ Under 2 hours

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Normal ____ Rush ____
Need Results by ____
Extra charges will apply for Rush TAT.

W.O.# 22121
W.O.# ____

Amt Paid $ ____
Check # ____

Revised 4/2/09

Stella, Amanda B CIV NAVFAC Washington, EV

From: Stella, Amanda B CIV NAVFAC Washington, EV
Sent: Friday, December 16, 2011 10:09 AM
To: 'Mackert, Susan (DEQ)'
Cc: White, Brenna M CIV NAVFAC Washington
Subject: RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis
Signed By: amanda.stella@navy.mil

Hi Susan,

Per our telephone conversation today, we will plan to sample for total residual chlorine only. We will take our own measurement in the field, using our potable water chlorine meter.

Thanks again and have a great holiday!

Amanda B. Stella
Water Media Manager
Naval Support Facility, Dahlgren
Environmental Division

Telephone:(540) 653-1683
Fax: (540) 653-6242

-----Original Message-----
From: Mackert, Susan (DEQ) [mailto:Susan.Mackert@deq.virginia.gov]
Sent: Thursday, December 15, 2011 7:17
To: Stella, Amanda B CIV NAVFAC Washington, EV
Subject: RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Good Morning Ms. Stella,

In speaking with Central Office, staff indicated that CPO was going to be removed from the Attachment A sampling requirements. Given that information, we decided that Dahlgren does not need to sample for CPO.

If you have any questions, please feel free to contact me.

Regards,
Susan

Susan Mackert
Water Permit Writer, Senior II
Regional Industrial Storm Water Coordinator
Certified Erosion and Sediment Control Inspector #2804
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3853
Fax: (703) 583-3821
susan.mackert@deq.virginia.gov

ENCLOSURE (3)

-----Original Message-----
From: Stella, Amanda B CIV NAVFAC Washington, EV
[mailto:amanda.stella@navy.mil]
Sent: Wednesday, December 14, 2011 7:13 AM
To: Cunningham, Frederick (DEQ)
Cc: White, Brenna M CIV NAVFAC Washington; Mackert, Susan (DEQ)
Subject: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Mr. Cunningham,

I have been in contact with Universal Laboratories to determine their ability to analyze Chlorine Produced Oxidant (CPO) in accordance with Attachment A of our VPDES Permit (VA0073636). Attachment A of our permit indicates we must sample for CPO and total residual chlorine. Both have the same CAS number (CAS 7782-50-5), indicating they are the same compound. The discharge from our outfall is freshwater/stormwater, though it is adjacent to a covered salt dome. Mr. Geoff Hinshelwood at Universal Laboratory indicated that he had a telephone discussion with you regarding CPO versus Total residual chlorine and thought it best if I contact you directly. From speaking with Mr. Hinshelwood, it appears that CPO and total residual chlorine are analyzed by the same method (SM 4500 CL), and the only difference is that in salt water the test is measuring hydrobromus acid and in fresh water it is measuring hydrochlorous acid. Could you please confirm if this is true? Also, if we are required to analyze for CPO, are the units reported out differently for CPO verses total residual chlorine?

Thank you in advance for your assistance.

Very Respectfully,

Amanda B. Stella
Water Media Manager
Naval Support Facility, Dahlgren
Environmental Division

Telephone:(540) 653-1683
Fax: (540) 653-6242

Stella, Amanda B CIV NAVFAC Washington, EV

From: Mackert, Susan (DEQ) [Susan.Mackert@deq.virginia.gov]
Sent: Thursday, December 15, 2011 7:17 AM
To: Stella, Amanda B CIV NAVFAC Washington, EV
Subject: RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Good Morning Ms. Stella,

In speaking with Central Office, staff indicated that CPO was going to be removed from the Attachment A sampling requirements. Given that information, we decided that Dahlgren does not need to sample for CPO.

If you have any questions, please feel free to contact me.

Regards,
Susan

Susan Mackert
Water Permit Writer, Senior II
Regional Industrial Storm Water Coordinator Certified Erosion and Sediment Control Inspector #2804 Virginia Department of Environmental Quality Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3853
Fax: (703) 583-3821
susan.mackert@deq.virginia.gov

-----Original Message-----
From: Stella, Amanda B CIV NAVFAC Washington, EV [mailto:amanda.stella@navy.mil]
Sent: Wednesday, December 14, 2011 7:13 AM
To: Cunningham, Frederick (DEQ)
Cc: White, Brenna M CIV NAVFAC Washington; Mackert, Susan (DEQ)
Subject: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Mr. Cunningham,

I have been in contact with Universal Laboratories to determine their ability to analyze Chlorine Produced Oxidant (CPO) in accordance with Attachment A of our VPDES Permit (VA0073636). Attachment A of our permit indicates we must sample for CPO and total residual chlorine. Both have the same CAS number (CAS 7782-50-5), indicating they are the same compound. The discharge from our outfall is freshwater/stormwater, though it is adjacent to a covered salt dome. Mr. Geoff Hinshelwood at Universal Laboratory indicated that he had a telephone discussion with you regarding CPO versus Total residual chlorine and thought it best if I contact you directly. From speaking with Mr. Hinshelwood, it appears that CPO and total residual chlorine are analyzed by the same method (SM 4500 CL), and the only difference is that in salt water the test is measuring hydrobromus acid and in fresh water it is measuring hydrochlorous acid. Could you please confirm if this is true? Also, if we are

required to analyze for CPO, are the units reported out differently for CPO verses total residual chlorine?

Thank you in advance for your assistance.

Very Respectfully,

Amanda B. Stella
Water Media Manager
Naval Support Facility, Dahlgren
Environmental Division

Telephone:(540) 653-1683
Fax: (540) 653-6242

Client Bulletin

Ammonia in Non-potable Water

Effective January 28, 2008, Analytical Laboratory Services, Inc. (ALSI) will be using a new analytical method for the determination of Ammonia-Nitrogen in non-potable water according to *ASTM Method D6919-03—Standard Test Method for Determination of Dissolved Alkali and Alkaline Earth Cations and Ammonium in Water and Wastewater by Ion Chromatography*. ALSI has obtained the proper NELAC certification for this method, which was recently approved under the Method Update Rule (MUR) and is listed in 40 CFR Part 136 as an approved method for ammonia-nitrogen. (See ALSI website for a listing of the MUR).

After performing method development and comparative studies of both the current analytical method and the new ASTM method on actual client samples, there were no differences observed in the analytical results. From the clients perspective on both the collection and the reporting end you should note little change. The method allows for more efficiency in our departments and reduces manual technician input thus reducing potential human error at the bench top. The ALSI staff believe this method will offer more stability and efficiency to our clients and will now be the preferred analytical method for non-potable water.

Due to the change in technique and method, only the method reference will be different on the analytical report for those samples received at the laboratory after the date of January 28, 2008. With regard to the costs of either analysis, we are pleased to note that all pricing for our clients will remain unchanged during this transition. The reporting limit of this method will remain the same—0.10 mg/l—and the collection bottle/preservative will remain unchanged as follows:

Method	Matrix	Container	Amount	Preservative	Holding Time
ASTM D6919-03	Nonpotable Water	P or G	500mL	H2SO4 pH<2;Cool 4°C	28 days

If you have any questions regarding this method or its affect on your submitted samples, please contact your project coordinator at 717-944-5541.

Susan Baer—Ext. 3104
De Brooks—Ext. 3131
Tonya Hironimus—Ext. 3108
Judy Kester—Ext. 3132
John Klingaman—717.505.5280

Analytical Laboratory Services, Inc.

34 Dogwood Lane, Middletown, PA 17057 ◇ 717.944.5541 ◇ Fax 717.944.1430 ◇ Philadelphia 610.640.1323 ◇ Maryland 410.244.8889 ◇ www.analyticallab.com

ENCLOSURE (4)

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 122, 136, 141, 143, 430, 455, and 465

[EPA-HQ-OW-2003-0070; FRL-]

RIN 2040-AD71

Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; National Primary Drinking Water Regulations; and National Secondary Drinking Water Regulations; Analysis and Sampling Procedures

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This rule modifies the testing procedures approved for analysis and sampling under the Clean Water Act and Safe Drinking Water Act. EPA proposed these changes for public comment on August 18, 2003 and April 6, 2004. The Clean Water Act changes adopted in this final rule fall into the following categories: new vendor-developed methods as well as EPA and voluntary consensus standard bodies (VCSB) methods, updated versions of currently approved methods, revisions to method modification and analytical requirements, withdrawal of certain outdated methods, and changes to sample collection, preservation, and holding time requirements. This rule also changes regulations under the Safe Drinking Water Act that establish drinking water sampling and analysis procedures. The changes include approval of vendor-developed methods, new EPA and VCSB methods, updated VCSB methods, and approval of a modification to the test kit used with Syngenta Method AG-625 that restricts its use in certain circumstances. The addition of new and updated methods to the wastewater and drinking water regulations provides increased flexibility to the regulated community and laboratories in the selection of analytical methods.

VPDES Permit Application Addendum

1. **Entity to whom the permit is to be issued:** US Naval Support Facility (NSF), Dahlgren

Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. **Is this facility located within city or town boundaries?** Yes ☐ No ☒

3. **Provide the tax map parcel number for the land where the discharge is located.** 1013

4. **For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities?** >50 acres

5. **What is the design average effluent flow of this facility?** N/A Stormwater MGD

For industrial facilities, provide the max. 30-day average production level, include units:

N/A all discharge is from stormwater runnoff

In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Yes ☐ No ☒

If "Yes", please identify the other flow tiers (in MGD) or production levels:

N/A

Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. **Nature of operations generating wastewater:**

No process water, all discharge is from stormwater associated with industrial activities

0 % of flow from domestic connections/sources

Number of private residences to be served by the treatment works: _____

100 % of flow from non-domestic connections/sources

7. **Mode of discharge:** ☐ Continuous ☒ Intermittent ☐ Seasonal

Describe frequency and duration of intermittent or seasonal discharges:

Discharge is due to precipitation event / stormwater runnoff

8. **Identify the characteristics of the receiving stream at the point just above the facility's discharge point:**

7 Permanent stream, never dry, (002, 003, 004, 006, 007, 009 and 013, Gambo and Machodoc Creek)

___ Intermittent stream, usually flowing, sometimes dry

1 Ephemeral stream, wet-weather flow, often dry, (012 discharge into Black Marsh)

___ Effluent-dependent stream, usually or always dry without effluent flow

___ Lake or pond at or below the discharge point

___ Other: _____

9. **Approval Date(s):**

O & M Manual *SWPPP 3/07/2012 **Sludge/Solids Management Plan** N/A

Have there been any changes in your operations or procedures since the above approval dates? Yes ☒ No ☐

*The SWPPP is continually being improved and revised. SWPPP is signed annually, most recently on 07 March 2012 by Jeffrey C. Bossart, by the direction of the Commanding Officer.

ENCLOSURE (8)

Stella, Amanda B CIV NAVFAC Washington, EV

From: Stella, Amanda B CIV NAVFAC Washington, EV
Sent: Friday, December 16, 2011 10:09 AM
To: 'Mackert, Susan (DEQ)'
Cc: White, Brenna M CIV NAVFAC Washington
Subject: RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis
Signed By: amanda.stella@navy.mil

Hi Susan,

Per our telephone conversation today, we will plan to sample for total residual chlorine only. We will take our own measurement in the field, using our potable water chlorine meter.

Thanks again and have a great holiday!

Amanda B. Stella
Water Media Manager
Naval Support Facility, Dahlgren
Environmental Division

Telephone:(540) 653-1683
Fax: (540) 653-6242

-----Original Message-----
From: Mackert, Susan (DEQ) [mailto:Susan.Mackert@deq.virginia.gov]
Sent: Thursday, December 15, 2011 7:17
To: Stella, Amanda B CIV NAVFAC Washington, EV
Subject: RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Good Morning Ms. Stella,

In speaking with Central Office, staff indicated that CPO was going to be removed from the Attachment A sampling requirements. Given that information, we decided that Dahlgren does not need to sample for CPO.

If you have any questions, please feel free to contact me.

Regards,
Susan

Susan Mackert
Water Permit Writer, Senior II
Regional Industrial Storm Water Coordinator
Certified Erosion and Sediment Control Inspector #2804
Virginia Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3853
Fax: (703) 583-3821
susan.mackert@deq.virginia.gov

ENCLOSURE (3)

-----Original Message-----
From: Stella, Amanda B CIV NAVFAC Washington, EV
[mailto:amanda.stella@navy.mil]
Sent: Wednesday, December 14, 2011 7:13 AM
To: Cunningham, Frederick (DEQ)
Cc: White, Brenna M CIV NAVFAC Washington; Mackert, Susan (DEQ)
Subject: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Mr. Cunningham,

I have been in contact with Universal Laboratories to determine their ability to analyze Chlorine Produced Oxidant (CPO) in accordance with Attachment A of our VPDES Permit (VA0073636). Attachment A of our permit indicates we must sample for CPO and total residual chlorine. Both have the same CAS number (CAS 7782-50-5), indicating they are the same compound. The discharge from our outfall is freshwater/stormwater, though it is adjacent to a covered salt dome. Mr. Geoff Hinshelwood at Universal Laboratory indicated that he had a telephone discussion with you regarding CPO versus Total residual chlorine and thought it best if I contact you directly. From speaking with Mr. Hinshelwood, it appears that CPO and total residual chlorine are analyzed by the same method (SM 4500 CL), and the only difference is that in salt water the test is measuring hydrobromus acid and in fresh water it is measuring hydrochlorous acid. Could you please confirm if this is true? Also, if we are required to analyze for CPO, are the units reported out differently for CPO verses total residual chlorine?

Thank you in advance for your assistance.

Very Respectfully,

Amanda B. Stella
Water Media Manager
Naval Support Facility, Dahlgren
Environmental Division

Telephone:(540) 653-1683
Fax: (540) 653-6242

Stella, Amanda B CIV NAVFAC Washington, EV

From: Mackert, Susan (DEQ) [Susan.Mackert@deq.virginia.gov]
Sent: Thursday, December 15, 2011 7:17 AM
To: Stella, Amanda B CIV NAVFAC Washington, EV
Subject: RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Good Morning Ms. Stella,

In speaking with Central Office, staff indicated that CPO was going to be removed from the Attachment A sampling requirements. Given that information, we decided that Dahlgren does not need to sample for CPO.

If you have any questions, please feel free to contact me.

Regards,
Susan

Susan Mackert
Water Permit Writer, Senior II
Regional Industrial Storm Water Coordinator Certified Erosion and Sediment Control Inspector #2804 Virginia Department of Environmental Quality Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193
Phone: (703) 583-3853
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From: Stella, Amanda B CIV NAVFAC Washington, EV [mailto:amanda.stella@navy.mil]
Sent: Wednesday, December 14, 2011 7:13 AM
To: Cunningham, Frederick (DEQ)
Cc: White, Brenna M CIV NAVFAC Washington; Mackert, Susan (DEQ)
Subject: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

RE: VPDES Permit # VA0073636 Attachment A- Chlorine Produced Oxidant (CPO) analysis

Mr. Cunningham,

I have been in contact with Universal Laboratories to determine their ability to analyze Chlorine Produced Oxidant (CPO) in accordance with Attachment A of our VPDES Permit (VA0073636). Attachment A of our permit indicates we must sample for CPO and total residual chlorine. Both have the same CAS number (CAS 7782-50-5), indicating they are the same compound. The discharge from our outfall is freshwater/stormwater, though it is adjacent to a covered salt dome. Mr. Geoff Hinshelwood at Universal Laboratory indicated that he had a telephone discussion with you regarding CPO versus Total residual chlorine and thought it best if I contact you directly. From speaking with Mr. Hinshelwood, it appears that CPO and total residual chlorine are analyzed by the same method (SM 4500 CL), and the only difference is that in salt water the test is measuring hydrobromus acid and in fresh water it is measuring hydrochlorous acid. Could you please confirm if this is true? Also, if we are

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Very Respectfully,

Amanda B. Stella
Water Media Manager
Naval Support Facility, Dahlgren
Environmental Division

Telephone:(540) 653-1683
Fax: (540) 653-6242

Client Bulletin

Ammonia in Non-potable Water

Effective January 28, 2008, Analytical Laboratory Services, Inc. (ALSI) will be using a new analytical method for the determination of Ammonia-Nitrogen in non-potable water according to *ASTM Method D6919-03—Standard Test Method for Determination of Dissolved Alkali and Alkaline Earth Cations and Ammonium in Water and Wastewater by Ion Chromatography*. ALSI has obtained the proper NELAC certification for this method, which was recently approved under the Method Update Rule (MUR) and is listed in 40 CFR Part 136 as an approved method for ammonia-nitrogen. (See ALSI website for a listing of the MUR).

After performing method development and comparative studies of both the current analytical method and the new ASTM method on actual client samples, there were no differences observed in the analytical results. From the clients perspective on both the collection and the reporting end you should note little change. The method allows for more efficiency in our departments and reduces manual technician input thus reducing potential human error at the bench top. The ALSI staff believe this method will offer more stability and efficiency to our clients and will now be the preferred analytical method for non-potable water.

Due to the change in technique and method, only the method reference will be different on the analytical report for those samples received at the laboratory after the date of January 28, 2008. With regard to the costs of either analysis, we are pleased to note that all pricing for our clients will remain unchanged during this transition. The reporting limit of this method will remain the same—0.10 mg/l—and the collection bottle/preservative will remain unchanged as follows:

Method	Matrix	Container	Amount	Preservative	Holding Time
ASTM D6919-03	Nonpotable Water	P or G	500mL	H2SO4 pH<2;Cool 4°C	28 days

If you have any questions regarding this method or its affect on your submitted samples, please contact your project coordinator at 717-944-5541.

Susan Baer—Ext. 3104
De Brooks—Ext. 3131
Tonya Hironimus—Ext. 3108
Judy Kester—Ext. 3132
John Klingaman—717.505.5280

Analytical Laboratory Services, Inc.

34 Dogwood Lane, Middletown, PA 17057 ◇ 717.944.5541 ◇ Fax 717.944.1430 ◇ Philadelphia 610.640.1323 ◇ Maryland 410.244.8889 ◇ www.analyticallab.com

ENCLOSURE (4)

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 122, 136, 141, 143, 430, 455, and 465

[EPA-HQ-OW-2003-0070; FRL-]

RIN 2040-AD71

Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; National Primary Drinking Water Regulations; and National Secondary Drinking Water Regulations; Analysis and Sampling Procedures

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This rule modifies the testing procedures approved for analysis and sampling under the Clean Water Act and Safe Drinking Water Act. EPA proposed these changes for public comment on August 18, 2003 and April 6, 2004. The Clean Water Act changes adopted in this final rule fall into the following categories: new vendor-developed methods as well as EPA and voluntary consensus standard bodies (VCSB) methods, updated versions of currently approved methods, revisions to method modification and analytical requirements, withdrawal of certain outdated methods, and changes to sample collection, preservation, and holding time requirements. This rule also changes regulations under the Safe Drinking Water Act that establish drinking water sampling and analysis procedures. The changes include approval of vendor-developed methods, new EPA and VCSB methods, updated VCSB methods, and approval of a modification to the test kit used with Syngenta Method AG-625 that restricts its use in certain circumstances. The addition of new and updated methods to the wastewater and drinking water regulations provides increased flexibility to the regulated community and laboratories in the selection of analytical methods.

Notification of Un-scanned Pages

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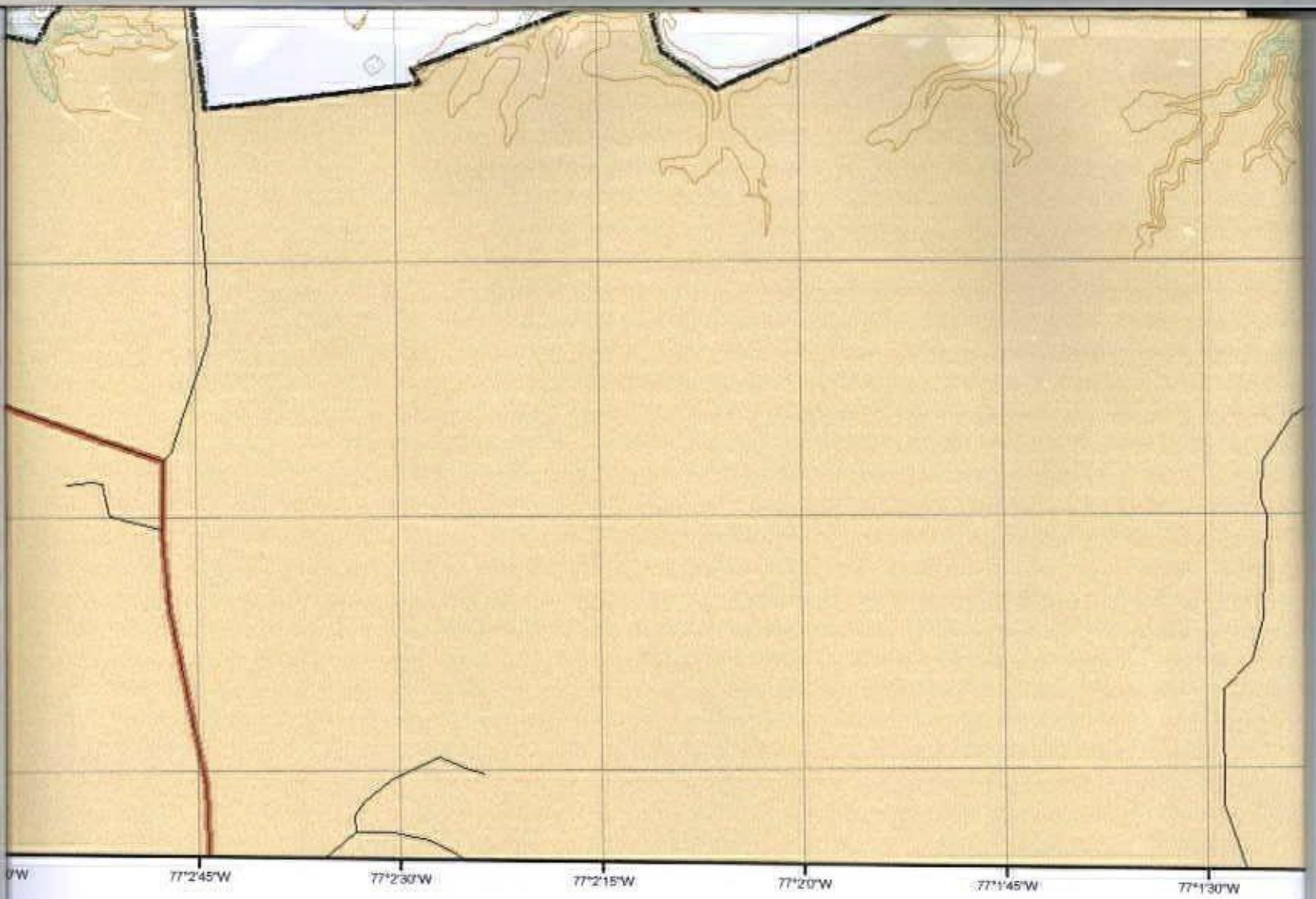
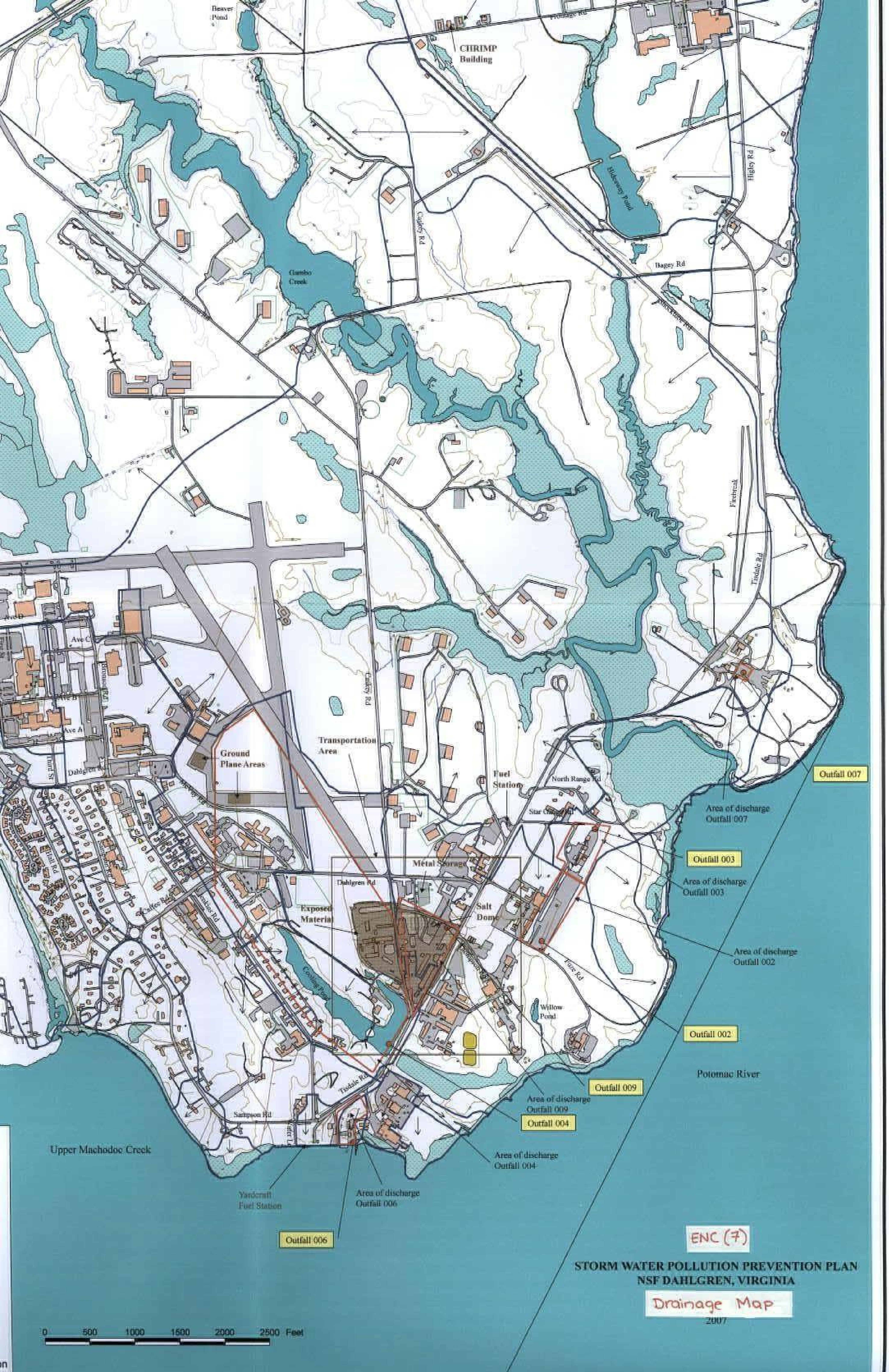


Support Activity South Potomac

Naval Support Facility Dahlgren

1 2

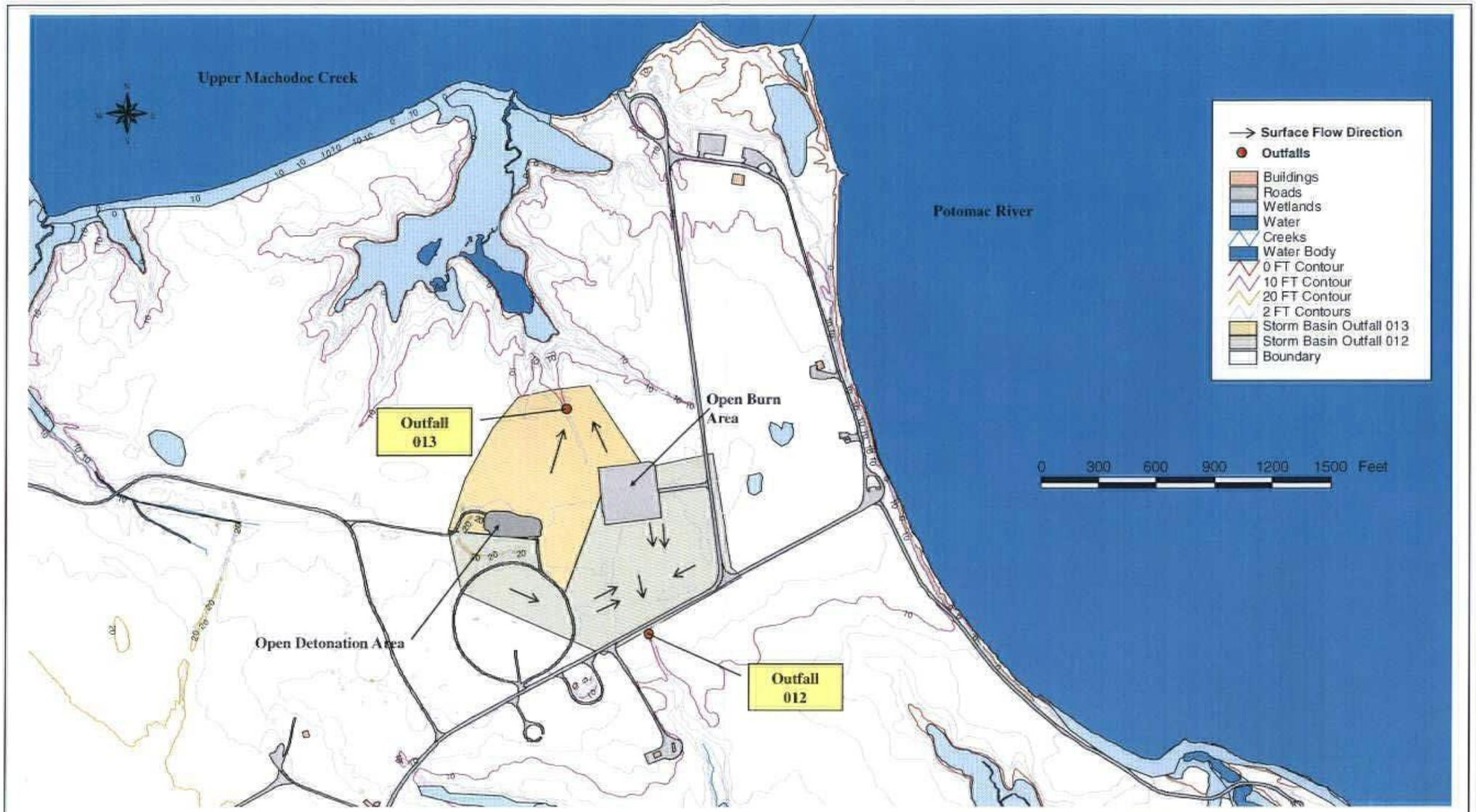

Beaver Pond
CHRIMP Building
Frontage Rd
Gambo Creek
Caskey Rd
Hideaway Pond
Higley Rd
Bagey Rd
Firebreak
Tisdale Rd
Ave C
Ave B
Ave A
Third St
Dahlgren Rd
Ground Plane Areas
Transportation Area
Fuel Station
North Range Rd
Star Gazer Rd
Metal Storage
Exposed Material
Salt Dome
Cooling Pond
Fuze Rd
Willow Pond
Hall Rd
Caffee Rd
Jenkins Rd
Tisdale Rd
Sampson Rd
Outfall 007
Area of discharge Outfall 007
Outfall 003
Area of discharge Outfall 003
Area of discharge Outfall 002
Outfall 002
Outfall 009
Area of discharge Outfall 009
Outfall 004
Area of discharge Outfall 004
Potomac River
Upper Machodoc Creek
Yardcraft Fuel Station
Area of discharge Outfall 006
Outfall 006
0 500 1000 1500 2000 2500 Feet

ENC (7)

STORM WATER POLLUTION PREVENTION PLAN
NSF DAHLGREN, VIRGINIA

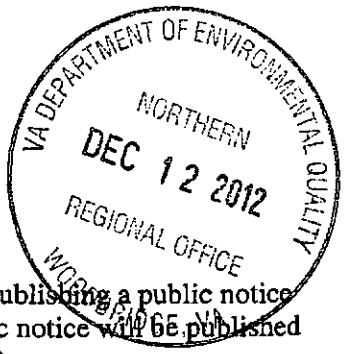
Drainage Map

2007



NSF DAHLGREN, PUMPKIN NECK ANEX
NSF Dahlgren Storm Water Pollution Prevention Plan
Dahlgren, Virginia

ENCLOSURE (6)
Form 2F, III. Drainage Map



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Owner: Department of the Navy

Applicant's Address: NAVFAC Washington, PWD South Potomac

18329 Thompson Road, Suite 226

Dahlgren, VA 2448-5110

Agent's Telephone Number: 540-653-5071

Authorizing Agent: _____
Signature
Walter A. Legg

VPDES Permit No.: VA0073636
Facility Name: Naval Support Facility Dahlgren

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ENCLOSURE (9)